ANNUAL REPORT

ON

VACCINATION IN THE MADRAS PRESIDENCY

AND ON THE WORK OF THE

VACCINE SECTION OF THE KING INSTITUTE OF PREVENTIVE MEDICINE, MADRAS

FOR THE YEAR

1917-18.

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D. No. $\frac{869}{V}$.

OFFICE OF THE SANITARY COMMISSIONER,
MADRAS, 19*th August* 1918.

From

MAJOR W. A. JUSTICE, M.B., C.M., D.P.H., I.M.S.,
Sanitary Commissioner for the Government of Madras,

To

THE SECRETARY TO THE GOVERNMENT OF MADRAS,
LOCAL AND MUNICIPAL DEPARTMENT.

SIR,

I have the honour to forward herewith the report of the Director, King Institute, Guindy, on the working of the Vaccine Section of the Institute and that of the Deputy Sanitary Commissioner, Madras, on the progress of vaccination in the Madras Presidency during the official year 1917–18.

2. *Vaccine Section of the King Institute, Guindy.*—(i) *General.*—The section maintained its usual standard of efficiency reflecting credit on the officers responsible for its working.

(ii) The cost of the section rose from Rs. 38,962 in 1916–17 to Rs. 43,319 in 1917–18. The increase occurred mainly under the budget head 'Cost of calves including transport.' The high cost of working the section during the year resulted in a slight rise of price of vaccine from 3 pies to 4 pies per case.

(iii) *Vaccine.*—The method of preparing vaccine at the Institute was the same as in the previous year. Lanolinated vaccine was the general supply made during the year to local bodies. Madras City and Colombo received their usual supplies of glycerinated vaccine.

Supplies of lanolinated vaccine to local bodies were made fortnightly as heretofore. Tri-monthly supplies also were ordered in a few special instances to see if frequent supplies would in any way improve the local success rates. The results were not disappointing. Now that vaccinators under the new scheme sanctioned in G.O. No. 963 L., dated 4th July 1917, will have no verification work whatever, it is proposed to supply vaccine thrice a month to all, in order to keep these vaccinators fully engaged on vaccination work proper throughout the month. The working of the system will be watched.

The average success rate of the year was less by 3·78 per cent than that of the previous year. The fall in the success rate was conspicuous in all the districts of the Presidency and was particularly so in South Kanara and Gōdāvari. As remarked by the Director, this universal low rate is difficult to explain. The Director should personally look into the matter and see if there is anything defective in the lymph supplied and, if so, how it should be remedied. The question will also be investigated by me and by my Deputies during our inspection tours and every endeavour will be made to set matters right.

3. *Vaccination Department.*—(i) *Deputy Sanitary Commissioners and their inspections.*—A second Deputy Sanitary Commissioner was appointed to the department at the close of the year and on his assumption of charge on the 28th February 1918 the three ranges were distributed as shown hereunder :—

(1) Dr. K. T. Matthew, D.HY., D.P.H. (Cantab.) in charge of Northern and Central Ranges with headquarters at Madras, and

(2) Dr. S. Jesudoss, B.A., M.B., C.M., D.P.H. (Cantab.), F.R.C.S.E., in charge of the Southern Range with headquarters at Coimbatore.

The inspections of the Deputy Sanitary Commissioners were, on the whole, satisfactory. Deputy Sanitary Commissioners should particularly bear in mind that the inspection of tracts much interior in the districts have been for a long time neglected and now that there is an additional Deputy Sanitary Commissioner on duty, they will see that no cause for complaint exists in this direction. The first programmes of inspection tours of these officers should include districts and tracts which have not been visited for a long time past. There are several such tracts in the East Coast and West Coast districts.

(ii) *Vaccination Staffs.*—The much-hoped-for re-organization of the vaccination staffs in the Presidency has at last been sanctioned and introduced with effect from 1st April 1918. Under this scheme, Deputy Inspectors of Vaccination and Vaccinators will get better rates of pay and this will, it is hoped, bring in men with superior qualifications and character and place the vaccination staffs of the Presidency on a more satisfactory basis. Presidents of Taluk Boards in whom is vested the direct control over these staffs should pay more attention to this branch of the district administration and on them therefore much depends the future satisfactory working of the department.

(iii) *Results of Vaccination, etc.*—The total number of cases vaccinated rose from 1,699,926 in 1916-17 to 1,707,278. The increase was chiefly under re-vaccination, indicating that the protective value of re-vaccination is appreciated by adults in times of smallpox epidemics. As suggested in the last year's report, the Government should consider the desirability of conferring upon the Presidents of District Boards the power to extend the compulsory provisions of vaccination to re-vaccination in areas threatened with smallpox epidemics, by amending the Local Boards Act. As observed by Dr. Matthew, good lymph, good vaccinator, and free extension of compulsory vaccination provisions of the District Boards Act are the chief factors underlying the successful working of the department. These matters should receive the earnest attention of the authorities in whose hands the power to control them rests.

I have the honour to be,

Sir,

Your most obedient servant,

W. A. JUSTICE, Major, I.M.S.,

Sanitary Commissioner for the Govt. of Madras.

ANNUAL REPORT ON THE WORK OF THE VACCINE SECTION OF THE KING INSTITUTE OF PREVENTIVE MEDICINE, GUINDY, FOR THE YEAR ENDING 31ST MARCH 1918.

The total number of cases supplied by the Institute during the year showed an increase of 66,779 or 3·29 per cent over that of the previous year. It was however still 22,698 or rather over 1 per cent short of the record number supplied in the year 1915–16.

2. Table I shows the quantity of vaccine issued to various bodies for the quinquennium 1913–14 to 1917–18.

TABLE I.

Statement showing the quantity of vaccine supplied to various bodies from 1913–14 to 1917–18.

To whom supplied.	1913–14.	1914–15.	1915–16.	1916–17.	1917–18.
Government officers including jails ...	47,172	20,951	21,451	{ 22,656 * 1,700 }	24,309
Agency Tracts	23,150	25,060	24,105	28,815	28,455
Military Department	27,587	25,671	14,410	19,677	44,655
District Boards	1,625,926	1,649,070	1,739,000	1,652,330	1,653,635
Municipalities	179,330	178,980	236,185	212,035	248,590
Superintendent of Vaccination, Secunderabad	...	19,530	8,970	7,930	9,560
Vaccinator, Bolarum	...	1,460	1,550	1,070	1,030
Civil Surgeon, Civil Hospital, Basrah ...	...	...	2,400	200	...
Private bodies	69,000	62,695	65,626	77,807	80,765
Total ...	1,972,165	1,983,417	2,113,697	2,024,220	2,090,999

* Supplied to the Port Health Officer, Negapatam.

The quantities supplied to the Agency Tracts, District Boards, and the Vaccinator, Bolarum, remain substantially the same as in last year. That supplied to the Port Health Officer, Negapatam, is classed along with the supplies to Government Officers and the Civil Surgeon, Civil Hospital, Basrah, disappears altogether. All the others show percentage increases which is very large 126·9 per cent in the case of the Military Department, are moderate in the cases of the Superintendent of Vaccination, Secunderabad, and municipalities, 20·5 per cent and 17·2 per cent, respectively, and are small, 7·3 per cent and 3·8 per cent in the cases of Government officers including jails and private bodies.

3. There was no change in the manufacture of the vaccine. As usual the bulk of the material issued was lanolinated vaccine, but glycerinated vaccine was supplied to Madras City and to Colombo as in previous years.

4. In the great majority of cases the usual fortnightly dispatch was adhered to, but the system of three supplies a month was extended so as to include the whole of the Madura district. Districts receiving three supplies a month were then Chingleput, Madura and parts of the Gōdāvari and North and South Arcot districts. Two of the five municipalities receiving three supplies a month, namely, Anantapur and Cocanada, showed improved results, so the experiment was continued for another year. It is intended shortly to give three supplies a month to the whole Presidency. This is to be done coincidentally with the introduction of the new scheme of vaccine operations which has arisen out of G.O. No. 963 L., dated 4th July 1917.

5. The introduction of the scheme allowing the vaccinators only five clear days after receipt of their consignments of vaccine does not appear to have been much of a success as the success rate for the whole Presidency shows a marked drop. The practice of putting off two or more days before commencing work

with a fresh batch of paste is far too prevalent. It is to be hoped that under the new scheme this evil will be more effectually checked.

6. Extra indents from district boards and mufassal municipalities amounted to 18·95 per cent and 21·69 per cent, respectively. This shows a considerable increase and efforts ought to be made to arrive at a closer estimate of the quantity that will be required.

In Madras City there were extra indents for only 600 cases out of a total of 72,975.

TABLE II.

Statement showing the expenditure incurred during the year 1917–18 under all heads of expenditure of the Vaccine Section of the King Institute of Preventive Medicine, Guindy.

Detailed heads of account.	Amount. RS.	A.	P.
Establishment charges—			
Assistant Director			
Clerks and Servants	14,225	11	11
Deputy Inspectors			
Famine batta	199	4	2
Travelling allowance	124	9	0
Total establishment ...	14,549	9	1
Supplies and services—Contingencies—			
Purchase of apparatus, stores	4,952	13	8
Cost of calves including transport	22,767	0	0
Feeding charges of calves	1,604	11	8
Water-works, stores	543	4	4
Gas works, stores	125	2	9
Purchase and repair of furniture	168	11	9
Tour charges	26	5	0
Cleaning charges	84	0	0
Service postage and telegram charges	2,867	6	0
Office expenses	816	11	2
Miscellaneous	23	11	0
Other contingencies	223	6	3
Pay of menials, etc.	3,112	2	9
Total contingencies ...	37,315	6	4
Proportionate cost of stationery supplied during 1917–18 ...	123	0	4
Do. of clothing supplied during 1917–18	55	0	7
Cost of repairs to the Vaccine Section buildings for 1917–18 as per statement furnished by the Executive Engineer, South Presidency Division, with his letter No. 1067 M., dated 26th 30th April 1918.	2,015	0	4
Total cost of stationery, clothing and repairs ...	2,193	1	3
Grand total, Vaccine Section ...	54,058	0	8

TABLE III.

Statement showing the net expenditure incurred during the year 1917–18 in the King Institute of Preventive Medicine, Guindy, Vaccine Section.

Particulars.	RS.	A.	P.	Amount. RS.	A.	P.
Gross expenditure as per Statement I				54,058	0	8
Deduct—						
(1) Credits under sale of calves and miscellaneous receipts remitted to treasury ...	5,691	4	0			
(2) Cost of vaccine lymph supplied to private bodies during the year	5,047	13	0			
				10,739	1	0
Net total expenditure ...				43,318	15	8

TABLE IV.

Statement showing the number of cases for which vaccine was despatched to different bodies—private bodies being excluded—during the year 1917–18.

To whom supplied.	Number of cases for which vaccine was supplied.	Rate per case.	Total amount debitable. RS. A. P.
1. Government officers including jails	(a) 24,309	4·041,766 pies.	* 523 11 7
2. Agency Tracts	28,455		† 611 2 1
3. Military Department	44,655		940 0 5
4. District Boards	1,653,635		‡ 35,703 6 2
5. Municipalities	248,590		§ 5,317 12 7
6. Superintendent of Vaccination, Secunderabad [Secunderabad Local (Abkári, etc.) Fund]	9,560		201 3 11
7. Vaccinator, Bolarum (Bolarum Cantonment Funds)	1,030		21 10 11
Total ...	2,010,234		43,318 15 8

(a) Includes 100 cases to Civil Surgeon and Port Health Officer, Negapatam.

N.B.—In calculating the cost per case of vaccine, Rs. 1,001–13–0 has been deducted from Rs. 43,318–15–8 as the former represents registration charges, and it is charged to the bodies concerned.

* Includes Rs.	12	0	0	for registering vaccine packets.
† „ „	12	2	0	„	„
‡ „ „	892	15	0	„	„
§ „ „	84	12	0	„	„
Total „	1,001	13	0		

7. An examination of Tables II, III and IV will show that there has been a sharp rise of Rs. 4,357 or 11 per cent in the net charges incurred. This has resulted in raising the price of vaccine from 3·744449 to 4·041766. The main cause for this increase is the much larger number of calves used, half as many again as in the previous year. The explanation of this is that it is partially but only slightly due to the increased output of vaccine. The main cause is probably traffic restrictions. During the cool weather of 1917 when work should have been at high pressure in order to lay by a store of vaccine secured under the best conditions possible, consignments of calves were delayed. Vaccination had therefore to be carried on during the hot weather and this probably led to the rejection of an increased number of calves. The yield per calf selected was much the same as in the previous year. A considerable number of calves were also used for experimental purposes. The extra number of calves naturally involved extra charges for feeding but this was more than counterbalanced by the credits under sale of calves remitted to the treasury.

Purchase of apparatus was the only contingency which showed any considerable reduction as compared with the amount expended last year. The amount remitted to Government as the cost of vaccine supplied to private bodies showed a slight rise.

TABLE V.

Returns recorded in the King Institute of Preventive Medicine, Guindy, from the whole of the Madras Presidency according to the months of the year.

Serial number.	Months.	Number successful.	Number unsuccessful.	Percentage of success.
1	April 1917	82,262	20,816	79·80
2	May „	76,788	25,199	75·30
3	June „	78,441	26,986	74·40
4	July „	76,528	31,691	70·71
5	August „	87,233	23,340	78·89
6	September „	94,995	18,619	83·61
7	October „	97,105	12,895	88·27
8	November „	96,429	16,127	85·67
9	December „	112,221	9,859	91·92
10	January 1918	102,212	10,563	90·63
11	February „	95,795	11,910	88·94
12	March „	83,551	13,381	86·19
	Total ...	1,083,560	221,386	83·03 % successful.

8. Table V shows the returns recorded at the King Institute from the whole of the Madras Presidency, excluding Madras City. It will be seen that there has been over the whole year a most regrettable drop of 3·78 per cent in the success rate as compared with last year. This is the biggest drop shown since 1910–11 and seems very difficult to explain. It is in the main due to extraordinary bad results in the first six months of the year when the average success rate was only 77·12 per cent or 9·69 per cent worse than that of the corresponding period of 1916. The results also come quite irregularly and do not show the usual temperature curve, the defect as compared with the previous year varying from 3·46 per cent in September to no less than 15·51 per cent in July. In the second six months of the year the average is 88·60 per cent or 0·32 per cent better than the corresponding period of 1916–17 and the figures follow the normal curve and even show the curious little autumnal drop in efficiency which has been frequently adverted to before.

TABLE VI.

Returns recorded in the King Institute of Preventive Medicine, Guindy, from the whole of the Madras Presidency according to districts, 1917–18.

Serial number.	Districts.	Total successful.	Total unsuccessful.	Percentage of success.
1	Anantapur	28,161	3,662	88·49
2	Bellary	21,526	1,546	93·29
3	Chingleput	37,625	9,644	79·59
4	Chittoor	30,114	4,274	87·57
5	Coimbatore	51,266	23,993	68·11
6	Cuddapah	22,124	5,934	78·85
7	Ganjām	54,702	9,866	84·71
8	Gōdāvari	38,309	24,378	61·11
9	Guntūr	53,480	6,766	88·76
10	Kistna	61,965	7,936	88·07
11	Kurnool	25,514	832	96·84
12	Madura	50,705	11,105	82·03
13	Malabar	79,748	23,627	77·14
14	Nellore	26,443	9,897	72·76
15	Nilgiris	5,488	329	94·34
16	North Arcot	52,773	7,631	87·36
17	Rāmnād	48,896	3,515	93·29
18	Salem	42,155	5,073	89·25
19	South Arcot	47,514	12,533	79·12
20	South Kanara	35,758	7,334	82·98
21	Tanjore	66,464	4,810	93·25
22	Tinnevelly	52,748	11,679	81·87
23	Trichinopoly	50,592	7,456	87·15
24	Vizagapatam	99,490	17,566	84·99
	Total ...	1,083,560	221,386	83·03

9. In Table VI an analysis of the returns is given district-war. Without a single exception all the districts show lower figure though it is inappreciable in 5 being below 1 per cent. Kurnool which again heads the list is only 0·01 per cent worse than last year, whereas Gōdāvari, too well accustomed to the bottom of the list, is 7·23 per cent worse than last year and is a very bad last. The defect in eight districts is definitely higher than the average defect, in eight districts it is considerably lower and in five very much lower than the average.

TABLE VII.

Statement showing the percentage of success obtained in certain districts selected for comparison in each of the last five years.

Serial number.	Districts.	1913–14.	1914–15.	1915–16.	1916–17.	1917–18.	Average.
1	Bellary	97·59	96·81	96·58	95·12	93·29	95·87
2	Anantapur	94·41	94·35	92·24	90·64	88·49	92·02
3	Kurnool	96·65	96·82	96·64	96·85	96·84	96·76
4	Gōdāvari	84·64	81·46	70·93	68·34	61·11	73·29
5	Coimbatore	78·92	76·59	70·99	68·72	68·11	72·66

10. Table VII shows the percentage rate of success in five districts selected for comparison. Gōdāvari on this occasion is the lowest and its average for the five years is coming dangerously close to that of Coimbatore. These comparisons have now been shown for the past eleven years and have been consistent throughout, Coimbatore and Gōdāvari always bad and at the bottom of the list; Bellary, Anantapur and Kurnool always good and at the top of the list. The distance between the two groups is also steadily increasing. When the comparisons were first started, Coimbatore was on an average for the years shown 14 per cent worse than Bellary. Now on an average of the past five years Coimbatore is 23·21 per cent worse than Bellary and 24·1 per cent worse than Kurnool. Kurnool is as remarkable for its consistency as for the goodness of its results. During the last five years the maximum variation in its success rate is 0·31 per cent.

TABLE VIII.

Statement showing the percentage of success obtained in the different months of the year for five years and the average for each month during that time.

Serial number.	Months.	1913–14.	1914–15.	1915–16.	1916–17.	1917–18.	Average.
1	April 1917	87·24	95·76	84·26	88·51	79·80	87·11
2	May ,, ...	86·09	92·85	82·62	84·00	75·30	84·17
3	June ,, ...	81·61	92·87	81·49	82·55	74·40	82·58
4	July ,, ...	87·47	93·19	83·27	86·22	70·71	84·17
5	August ,, ...	90·53	92·65	79·86	83·73	78·89	85·13
6	September ,, ...	92·10	92·14	81·75	87·07	83·61	87·33
7	October ,, ...	93·83	90·64	92·18	90·03	88·27	90·99
8	November ,, ...	96·17	90·33	92·76	89·21	85·67	90·82
9	December ,, ...	93·79	86·82	93·28	86·25	91·92	90·41
10	January 1918	95·28	87·24	92·82	89·28	90·63	91·05
11	February ,, ...	96·36	87·91	93·74	86·88	88·94	90·76
12	March ,, ...	95·72	87·45	92·48	88·04	86·19	89·97

11. The irregularities pointed out this year and the last have not succeeded in affecting the quinquennial average which shows a defined seasonal curve.

TABLE IX.

Statement showing the duration of storage of 'Lanoline' paste during the official year 1917–18.

Serial number.	Months.	Duration of storage each month.	
		Minimum period.	Maximum period.
1	April 1917	26 days ...	41 days
2	May ,, ...	4 ,, ...	40 ,,
3	June ,, ...	7 ,, ...	54 ,,
4	July ,, ...	8 ,, ...	61 ,,
5	August ,, ...	57 ,, ...	64 ,,
6	September ,, ...	1 ,, ...	69 ,,
7	October ,, ...	1 ,, ...	38 ,,
8	November ,, ...	4 ,, ...	36 ,,
9	December ,, ...	5 ,, ...	17 ,,
10	January 1918	5 ,, ...	27 ,,
11	February ,, ...	21 ,, ...	37 ,,
12	March ,, ...	22 ,, ...	56 ,,

12. Table IX shows the maximum and minimum periods during which lanolinated lymph was stored in the cold room during the official year. As pointed out in paragraph 7 the vaccination of calves had to be carried on more continuously and therefore the periods of storage were necessarily shorter. If, as some have held, storage be detrimental to the vaccine, some evidence to this effect should be got by a comparison of this year's figures with the last. The average minimum period of storage last year was 38·3 days, this year 13·4 days, barely more than a third of the time; the average maximum period of storage last year

was 98·5, this year only 45 days, considerably less than a half. The results over all being so much worse this year than last, it must be concluded that the period of storage, within the limits shown, has no detrimental effect on the vaccine.

TABLE X.

Statement showing the duration of storage of 'Glycerine' paste during the official year 1917–18.

Serial number.	Months.	Duration of storage each month. Minimum period.	Maximum period.
1	April 1917	5 days ...	28 days.
2	May "	6 " ...	21 "
3	June "	7 " ...	35 "
4	July "	8 " ...	32 "
5	August "	15 " ...	44 "
6	September "	44 " ...	72 "
7	October "	6 " ...	28 "
8	November "	1 " ...	29 "
9	December "	3 " ...	27 "
10	January 1918	10 " ...	44 "
11	February "	10 " ...	31 "
12	March "	3 " ...	42 "

13. Table X gives the same information as Table IX but for glycerinated vaccine. It calls for no farther remark than that conditions being similar, the periods of storage were much shorter than last year.

TABLE XI.

Statement showing the average yield of pulp per calf according to the months of the year 1917.

Serial number.	Months.	Grammes. Average.	Maximum.	Minimum.	Average yield of lymph per calf during 1917.
1	January	3·8	12·0	1·0	5·24 grammes.
2	February	4·5	11·0	1·0	
3	March	5·0	12·2	1·0	
4	April	6·0	13·8	1·5	
5	May	5·7	12·4	1·2	
6	June	5·3	16·0	1·2	
7	July	5·6	18·0	1·5	
8	August	No operation.			
9	September	4·0	8·6	1·0	
10	October	4·0	10·1	1·2	
11	November	4·1	9·5	1·0	
12	December	6·04	17·5	1·0	

14. Table XI gives details as to the quantity of pulp obtained from calves. It will be noticed that there was only one month out of the twelve during which no calves were vaccinated for lymph collection. Last year there were four such months. Two months show higher maximal quantities than any recorded last year but there was more fluctuation. The average yield per animal selected was almost exactly the same as in last year, 5·24 grammes as against 5·25 grammes in 1916–17.

TABLE XII.

Statement showing the average yield of lymph per calf according to years.

Year.	Grammes.	Year.	Grammes.
1904	4·9 *	1911	5·3
1905	3·5	1912	5·9
1906	No records.	1913	5·3
1907	3·2	1914	7·9
1908	2·6	1915	6·29
1909	3·7	1916	5·25
1910	5·1	1917	5·24

* The records are incomplete; this figure would be lower.

15. Table XII gives the average yield per calf in each year since the Institute was founded. The decrease of 0·01 gramme as compared with last year is inappreciable. In five out of the eight last year's the figure has been five and a small fraction. It seems likely that with the present strains now available, this figure is the normal one.

16. Civil Assistant Surgeon S. Ramakrishnan continued as temporary Assistant to the Director till 2nd December 1917 when he was relieved by Civil Assistant Surgeon M. Gopala Ayyar who continued from 3rd December to 31st March 1918.

17. The Vaccination class was held as usual during February and March 1918. Fifty students attended and 49 of them obtained qualifying marks in the examination held at the end of the course.

18. Four medical graduates attended a course of instruction on the methods of preparation and preservation of animal vaccine and all passed the examination at the end of the course.

19. The staff of the section worked well and carried out their various duties with efficiency.

THE KING INSTITUTE, GUINDY,
7th June 1918.

F. MAITLAND GIBSON, M.B., B.SC.,
Director.

REPORT ON VACCINATION IN THE MADRAS PRESIDENCY FOR THE YEAR 1917–18.

From Dr. K. T. MATTHEW, D.HY., D.P.H. (Cantab.), Deputy Sanitary Commissioner and Inspector of Vaccination, Madras, to the Sanitary Commissioner for Madras, No. 217, dated 26th June 1918.

I have the honour to submit the Annual Report on Vaccination in the Madras Presidency for the year 1917–18.

2. *Staff.*—I continued to be in charge of all the three Deputy Sanitary Commissioners' Ranges in the Presidency till the 28th February 1918 on which date Dr. S. Jesudoss, the newly appointed Deputy Sanitary Commissioner, took charge of the Southern Range. Since then I am in charge of the Northern and Central Ranges.

The following statement shows the subordinate vaccination staffs employed in the Presidency during the past two years :—

—	Deputy Inspectors.			First-class vaccinators, Rs. 20—15.	Second-class vaccinators, Rs. 12—10.	Third-class vaccinators, Rs. 7—5.	Total number of vaccinators.
	First grade, Rs. 70.	Second grade, Rs. 60.	Third grade, Rs. 40.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1916–17	19	23	40	261	437	151	849
1917–18	19	20	43	256	440	165	861

NOTE—These figures include the staffs employed in Bangalore and Secunderabad Cantonments and exclude those on duty in the King Institute, Guindy. In the Institute five Deputy Inspectors of the first grade were employed during the past year.

3. *Inspections by the Deputy Sanitary Commissioners.*—During the year under report I inspected the municipalities of Dharapuram, Coimbatore, Hospet, Chittoor, Kurnool, Mangalore and Vizagapatam and vaccination in the districts of Chittoor, Cuddapah, South Arcot, Malabar, the Nilgiris, Tinnevelly, South Kanara, Vizagapatam and Koraput. The number of villages and towns other than municipalities inspected in these districts was 229 and the total number of cases of vaccination verified was 3,288. A good number of cases was also verified in the municipal towns inspected. A class for the training of Plague Inspectors was opened at the King Institute, Guindy, on 15th March 1918, with 49 students from different parts of the Presidency. The preliminary arrangements and lectures in connexion with it kept me at head-quarters practically throughout March and the following month. The two batches of students trained by the District Medical and Sanitary Officer, Kurnool, for Plague Inspector's work were examined by me and certificates given to those found fit.

Dr. Jesudoss during the one month he was in charge of the Southern Range inspected the Srirangam Municipality and visited 9 villages in the Malabar district where he verified 267 cases of vaccination.

4. (i) *Vaccination.*—The trial scheme of vaccination continued to be in force during the year in the whole of Chingleput district and in selected areas of North Arcot, South Arcot and Madura districts. The cry for many years past in the Presidency has been the poor pay and prospects offered to vaccinators and the consequent inferior quality of hands available and employed for this work. During the year under report, the Government have passed orders in G.O. No. 963 L., dated 4th July 1917, for the reorganization of the subordinate vaccination establishments considerably improving the pay and prospects of vaccinators and of Deputy Inspectors of Vaccination. The minimum pay of vaccinators under this order is Rs. 15 with a fixed travelling allowance of Rs. 10 a month and the maximum Rs. 40 also with a fixed travelling allowance of

Rs. 10. These posts are also recommended to be made pensionable. It now remains for the District Boards in whom these appointments are vested to select suitable men for the posts and thus make vaccination in the Presidency a success. The reorganization was ordered to be given effect to from 1st April 1918.

(ii) The total vaccination work performed during the past two years by all the agencies throughout the Presidency is shown in the following table:—

	1916–17.	1917–18.
Primary vaccination (including secondary) ...	1,481,337	1,432,386
Re-vaccination	218,589	274,892
Total ...	1,699,926	1,707,278

As compared with the previous year the total number of cases under primary and re-vaccination showed an increase of 7,352. There was a fall under primary vaccination, but an increase in the number of re-vaccinations. Considering that many of the old vaccinators worked with much indifference as they knew that they would have to lose their position with the introduction of the new scheme, the outturn may, on the whole, be taken as satisfactory. The increase in the number of re-vaccinations is noted with satisfaction. The importance of re-vaccination as a preventive against smallpox cannot be over-estimated. Much of the disease and deaths from smallpox is confined to adults in whom the effects of primary vaccination have, either wholly or partially, disappeared with time. I would therefore urge on the district authorities never to relax their efforts to push on this wholesome measure. The inconvenience resulting from re-vaccination is often very little and most people are able to carry on their ordinary avocation without a day's interruption after re-vaccination. There is, therefore, no excuse for avoiding re-vaccination. As compared with the previous year, large increases are noticeable in the districts of Coimbatore (+ 9,850), Guntūr (+ 9,276) and Nellore (+ 6,419). The districts which show a great decrease in this direction are Vizagapatam (— 8,541), Salem (— 7,399), Ganjām (— 5,829) and Chittoor (— 5,144). The decrease in these districts is attributed to vacancies in the staff of vaccinators which could not be filled up for want of suitable hands, diminished prevalence of smallpox and despondency of the old set of vaccinators who expected to be sent away at the close of the year.

(iii) The following table shows the total successful vaccinations by all agencies and the percentage of successful cases including re-vaccinations:—

Establishment.	Number of successful vaccinations. 1916–17. Primary vaccination.	1916–17. Re-vaccination.	1917–18. Primary vaccination.	1917–18. Re-vaccination.	Total of successful vaccinations. 1916–17.	1917–18.	Ratio per cent of successful cases. 1916–17. Primary vaccination.	1916–17. Re-vaccination.	1917–18. Primary vaccination.	1917–18. Re-vaccination.	Ratio per cent of total successful cases. 1916–17.	1917–18.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local Fund vaccinators ...	1,090,029	97,737	989,157	121,763	1,187,766	1,110,920	86·2	76·7	82·6	73·4	85·3	81·5
Government do. ...	13,900	4,119	15,057	3,024	18,019	18,081	82·0	80·2	81·8	73·4	81·6	80·3
Municipal do. ...	107,326	34,500	113,652	41,079	141,826	154,731	93·0	68·6	91·0	67·0	85·6	83·1
Cantonment do. ...	2,950	1,667	3,497	2,763	4,617	6,260	87·6	40·9	85·2	41·5	62·0	58·1
Dispensaries ...	145	30	189	92	175	281	98·0	100·0	99·0	87·6	98·3	94·9
Medical subordinates ...	213	6,771	103	7,252	6,984	7,355	88·0	66·3	52·8	70·5	66·8	70·1
Total ...	1,214,563	144,824	1,121,655	175,973	1,359,387	1,297,628	86·7	73·4	83·4	70·8	85·0	81·4

The percentage of success both under primary vaccination and re-vaccination showed a marked fall. The total fall is 3·6 per cent when compared with 1916–17 and the fall in the percentage of success under primary vaccination including secondary operations is 3·3. As observed in the last year's report it would be more correct to compare the success rates under primary vaccination alone. A

perusal of the previous annual reports on vaccination shows that the success rate under primary vaccination was 91·8 per cent in 1913–14, 90·8 in 1914–15, 87·7 in 1915–16 and 86·7 in 1916–17. The success rate during 1917–18 as already observed was 83·4 so that there has been a continuous fall in the success rate from year to year. Steps taken by means of special circulars to improve the technique of operation and to use the lymph promptly and by the issue of tri-monthly supply of vaccine lymph to certain selected localities to ensure the more prompt use of lymph have not been of much avail. There is no doubt that many of the old vaccinators are difficult to be moved out of their old grooves. The fall is put down by several of the Deputy Inpectors to the indifference shown by unqualified vaccinators who expected to be ousted out of the department on the introduction of the new scheme. But even all these do not wholly explain the steady fall in the success rate. A trial with the use of freshly prepared lymph as opposed to stored lymph made towards the close of the year showed some improvement in the result and the supply of fresh lymph is now being continued.

To ensure good vaccination three factors are necessary, viz. (1) good lymph, (2) good vaccinator, and (3) compulsory powers. The authorities at the King Institute are constantly on the alert to ensure a supply of good lymph. It is earnestly hoped that the district authorities will take full advantage of the G.O. No. 963 L., dated 4th July 1917, to purge the department of the old and useless vaccinators and to provide a proper set of men with suitable education and special training instead. It would indeed be a false sense of sympathy to exempt and continue in service any of the old vaccinators who cannot do full justice to their work. And last but by no means the least I hope the Government will be pleased to introduce compulsory vaccination in all the districts except perhaps in the Agency tracts as soon as possible. In the absence of compulsory powers it is difficult to collect children in a suitable place for vaccination and verification of results and it remains to be seen whether the scheme sanctioned in G.O. No. 963 L., dated 4th July 1917, is even practicable without it.

Infantile vaccination.—When compared with the previous year there was a fall of 38,544 in the number of children successfully vaccinated under one year of age. The districts which show a marked decrease in this respect are the Nilgiris (— 13·2%), Kistna (— 11·4%), Malabar (— 11·3%) and Bellary (— 10·1%). The following districts show a decided increase in this respect: Ganjām (+ 36·4%), Tanjore (+15·3%) and South Arcot (+11·6%). Among municipalities Gudiyāttam (+ 42·9%), Virudupatti (+ 41·0%), Narasaraopet (+ 36·4%), Karūr (+ 31·7%), Vāniyambādi (+29·8%), Dhārāpuram (+28·1%), Erode (+27·7%), Coimbatore (+ 27·2%) and Salem (+ 27·2%) show an increase and Bellary (— 55·7%), Coonoor (— 35·7%) and Peddapur (— 30·1%) show a marked decrease.

(iv) The cost of the various vaccination staffs and the average cost of each successful case are exhibited in the subjoined statement :—

Establishment.	Total expenditure.		Average cost of each successful case.	
	1916–17.	1917–18.	1916–17.	1917–18.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Government establishment ...	10,690 12 6	10,797 4 3	0 9 6	0 9 7
Local fund do. ...	2,86,188 5 0	2,88,677 10 4	0 3 10	0 4 2
Municipal do. ...	42,511 8 2	42,607 13 5	0 4 10	0 4 5
Cantonments do ...	3,408 15 0	3,807 8 3	0 11 10	0 9 9
Total ...	* 3,42,799 8 8	3,45,890 4 3	0 4 1	0 4 3

When compared with the previous year there is a rise in the cost of all kinds of establishment. The average cost of each successful case rose from As. 4–1 in 1916–17 to As. 4–3 in 1917–18. It varied from As. 2–7 in Guntūr district to As. 10–11 in the Nilgiris.

* Exclusive of the pay and allowances of the Inspectors of Vaccination and Deputy Sanitary Commissioners.

The municipalities which showed a comparatively high cost per successful case are Peddapuram (As. 13-5), Kodaikānal (As. 12-6) and Tirupati (As. 9-1). The lowest figure was reached by Calicut Municipality where it was As. 1-11. The rate in Cannanore was As. 2-1, in Tuticorin As. 2-3 and in Vizianagram and Madura As. 2-6.

(v) Vaccination was compulsory in all the municipalities. The total number of operations performed during the year is 195,110 against 174,810 in 1916-17, i.e., there is an increase of 20,300 operations. The municipalities which show a marked increase in the number of operations over the previous year are Madura (+14,140) and Cochin (+2,168). The towns which show a large decrease in this respect are Madras (— 3,090) and Cocanada (— 1,541). The fall in Madras City is attributed to the very large number of re-vaccinations performed in 1916-17 during the prevalence of an epidemic of smallpox there, and in the Cocanada Municipality it is reported to be due to the reduction of the minimum fixed for vaccinators, an explanation which can hardly be accepted as satisfactory.

(vi) The following table exhibits the comparative success obtained by the use of different kinds of lymph in primary vaccination (including secondary):—

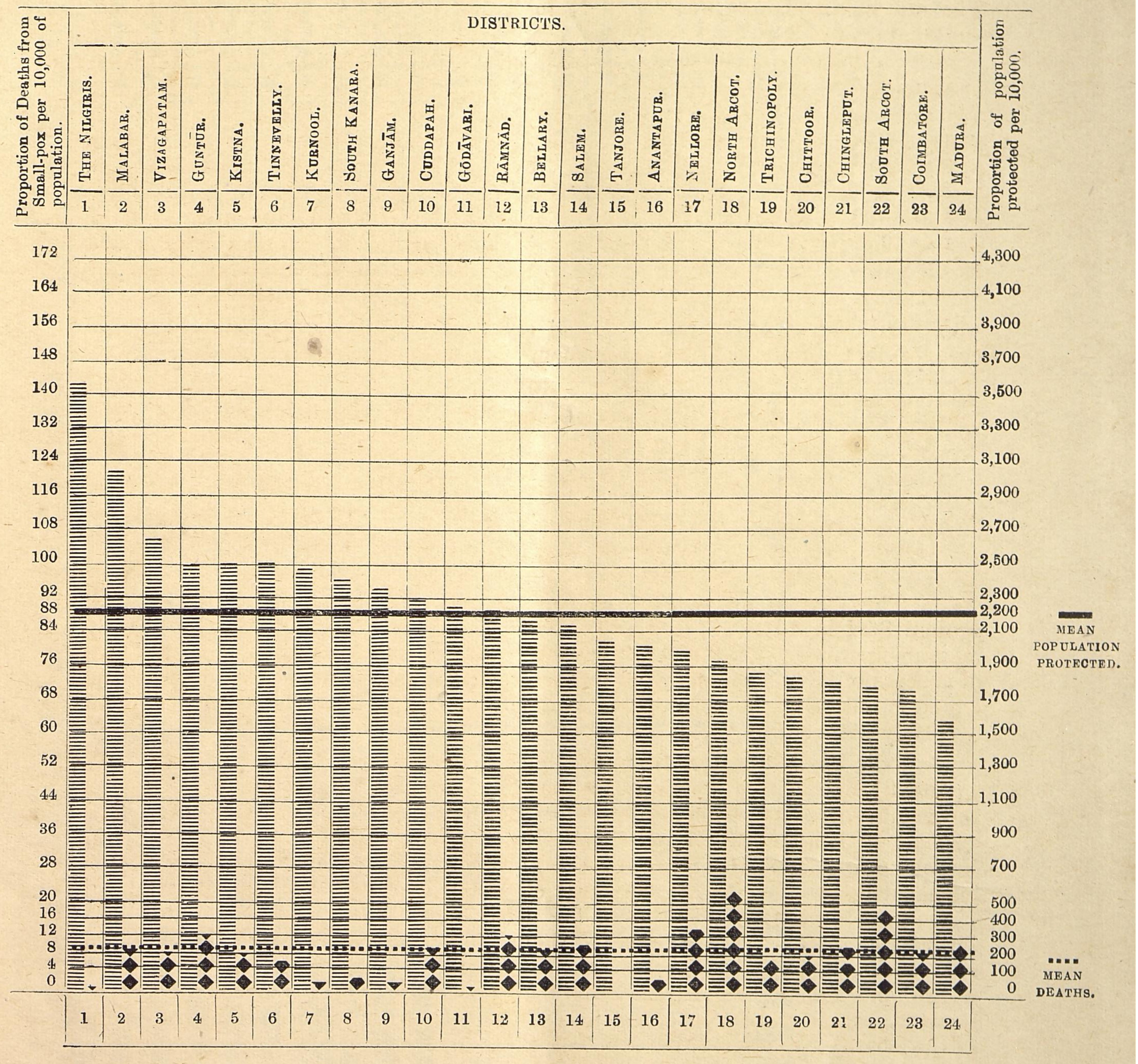
Number of cases excluding unknown.	Area.	Kind of lymph.	Whence obtained.	Percentage of success.
1,196,909	Local Fund ...	Lanoline lymph ...	Supplied by the King Institute, Guindy.	82·6
...	Do. ...	Glycerine " ...	Do.	...
1,02,252	Municipalities ...	Lanoline " ...	Do.	89·3
22,693	Do. ...	Glycerine " ...	Do.	98·3

The percentage of success from lanoline lymph was 82·6 in 1917-18 against 86·2 in 1916-17 in Local Fund areas and 89·3 and 92·2, respectively in municipalities. On the other hand glycerine lymph showed an increased rate of success of 98·3, against 96·8 in the previous year. The supply of glycerine lymph is practically confined to the Madras City and all glycerine lymph supplied is freshly prepared.

(vii) 34,958 deaths from smallpox were reported during the year 1917 against 21,903 in 1916. This means that there has been a considerable increase in the number of deaths from smallpox in 1917 over that of the previous year. The districts of South Arcot, North Arcot, Malabar, Madura, Vizagapatam, Tanjore, Coimbatore, Kistna, Guntūr, Rāmnād and Nellore reported large number of deaths from smallpox. I may observe that all these districts with the exception of Tanjore were inspected by me and the district authorities were acquainted with the poor state of vaccination existing there. The agencies employed for reporting outbreaks of infectious diseases in villages are still very mperfect. It is often weeks and months before the report of the village official reaches the proper quarter. A more strict enforcement by the district authorities of the provisions in the Board's Standing Order No. 102 seems highly necessary.

(viii) The Deputy Inspectors of Vaccination, Kavali (32·0), Pattukkōttai (49·0) and Calicut (49·5) failed to verify the minimum of 50 per cent of the cases vaccinated within their ranges. Of these the shortage in Calicut and Pattukkōttai is small and the Deputy Inspectors have accounted for it satisfactorily. The Deputy Inspector of Vaccination, Kavali range, is being dealt with suitably for his neglect.

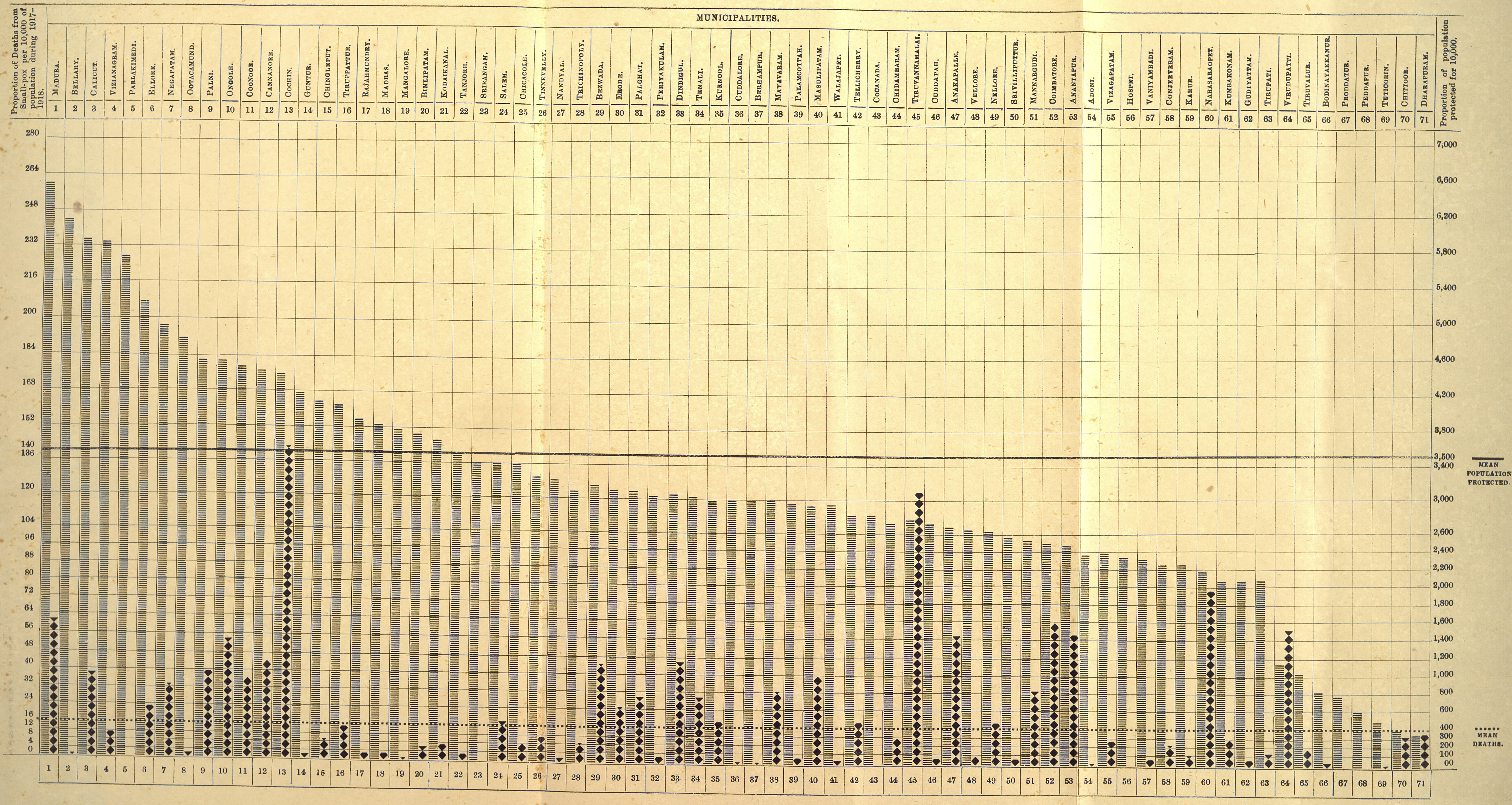
(ix) During the year under report one Deputy Inspector of Vaccination was dismissed from service for submission of false diaries and returns, one was removed from service for continued neglect and incompetence, one was reduced, one was suspended and several were fined for serious irregularities of one sort or another. Of the 86 Deputy Inspectors borne on the Provincial list 80 are qualified or Certificated Sanitary Inspectors, the remaining are either exempted men or those specially selected for these posts before the present rules came into force. The service registers of all the Deputy Inspectors of Vaccination are being verified in the office of the Sanitary Commissioner for Madras.



REFERENCE.

|||||||||||||| REPRESENT THE POPULATION PER 10,000 PROTECTED FROM SMALL-POX.

◆◆◆◆ REPRESENT THE PROPORTION OF DEATHS FROM SMALL-POX PER 10,000 POPULATION.



REFERENCE.

▮▮▮▮▮▮ REPRESENT THE PROPORTION OF POPULATION PER 10,000 PROTECTED FROM SMALL-POX.

◆◆◆◆◆◆◆ REPRESENT THE PROPORTION OF DEATHS FROM SMALL-POX PER 10,000 OF POPULATION.

5. The figures required for the compilation of the statements appended to this report have to be obtained in the first instance from the Deputy Inspectors of Vaccination, Chairmen of Municipal Councils, District Medical and Sanitary Officers, Civil Surgeons, etc., and they are not all received on the due date. In some cases the figures furnished by these officers are found to be incorrect and revised statements with correct figures have therefore to be called for. During the year under report revised statements from the Deputy Inspector of Vaccination, Bhadrāchalam and the Chairman, Municipal Council, Nellore, were received on the 13th and 15th of June 1918 respectively in spite of repeated reminders and telegrams. Hence the slight delay in the submission of this report.

6. I have once again the pleasure to record the good services done by the ministerial staff. The arrangements preparatory to the introduction of the new scheme of vaccination sanctioned in G.O. No. 963 L., dated 4th July 1917, resulted in a multitude of references from the districts all of which had to be urgently attended to to enable the scheme to be brought into force at the beginning of the next official year. This involved a considerable increase of work which they cheerfully undertook.

I have the honour to be,

Sir,

Your most obedient servant,

K. T. MATTHEW, D.HY., D.P.H. (CANTAB.),

Deputy Sanitary Commissioner
and Inspector of Vaccination, Madras.

VACCINATION STATEMENTS.

A—VACCINE DEPARTMENT.

Statement No. 1 showing the Particulars of Vaccination in the Madras Presidency for the official year 1917–18.

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated. Males.	Females.	Total.	Average number of persons vaccinated by each vaccinator.	Primary: Total number of operations.	Under 1 year.
1	2	3	4	5	6	7			8	9	10
		NORTHERN RANGE.									
1	Ganjām.	Berhampur circle ...	*2,153,614	257	9	7,006	5,898	12,904	1,434	11,402	4,814
2		Chicacole do. ...			9	7,381	6,755	14,136	1,571	10,126	5,494
3		Aska do. ...			8	6,570	4,771	11,341	1,418	9,210	3,350
4		Parlākimedi do. ...			8	6,918	6,208	13,126	1,641	8,836	3,884
5		Purushottapur do. ...			8	7,766	5,243	13,009	1,626	10,909	4,281
6		Ganjām Hill Tracts, North.			8	4,644	3,925	8,569	1,071	8,055	1,842
7		Ganjām Hill Tracts, South			7	4,321	3,893	8,214	1,173	5,892	1,107
		Total of district ...	*2,153,614	257	57	44,606	36,693	81,299	1,426	64,430	24,772
8	Gōdāvari.	Cocanada circle ...	1,534,896	249	7	6,212	5,801	12,013	1,716	13,858	3,997
9		Rajahmundry do. ...			9	10,983	10,025	21,008	2,334	22,634	2,665
10		Polavaram do. ...			6	2,754	2,539	5,293	882	5,274	740
11		Peddapur do. ...			10	6,667	6,261	12,928	1,293	18,209	4,240
12		Bhadrāchalam do. ...			6	1,742	1,639	3,381	564	3,684	805
		Total of district ...	1,534,896	249	38	28,358	26,265	54,623	1,437	63,659	12,447
13	Guntūr.	Guntūr circle	1,614,702	283	10	12,330	10,865	23,195	2,320	20,065	10,469
14		Narasaraopet circle ...			10	14,967	10,266	25,233	2,523	17,084	5,824
15		Bāpatla do. ...			11	13,301	11,794	25,095	2,281	20,450	6,762
		Total of district ...	1,614,702	283	31	40,598	32,925	73,523	2,372	57,599	23,055
16	Kistna.	Ellore circle	1,884,726	319	15	12,482	12,079	24,561	1,637	24,668	8,021
17		Masulipatam circle ...			14	12,213	10,558	22,771	1,627	21,484	7,266
18		Narasapur do. ...			12	10,221	9,552	19,773	1,648	20,272	6,290
		Total of district ...	1,884,726	319	41	34,916	32,189	67,105	1,637	66,424	21,577
19	Nellore.	Kavali circle ...	1,294,906	162	9	8,385	6,760	15,145	1,683	14,312	2,842
20		Gudur do. ...			9	9,777	7,472	17,249	1,917	11,775	2,939
21		Kanigiri do. ...			10	8,019	6,278	14,297	1,430	12,973	2,405
		Total of district ...	1,294,906	162	28	26,181	20,510	46,691	1,668	39,060	8,186
22	Vizagapatam.	Vizagapatam circle ...	2,454,029	...	14	16,919	16,697	33,616	2,401	28,935	7,935
...		Government vaccinators (Gudem hills) ...			2	860	765	1,625	812	1,621	231
23		Vizianagram circle ...			13	15,465	15,894	31,359	2,412	24,604	4,611
24		Pārvatipuram do.			12	14,225	12,867	27,092	2,258	20,825	5,995
..		Government vaccinators, Palkonda Agency.			1	294	248	542	542	343	76
25		Gunupur circle			8	6,439	5,941	12,380	1,548	10,792	1,527
		Total of district ...	*2,454,029	...	50	54,202	52,412	106,614	2,132	87,120	20,375

* Includes Hill Tracts.

Number.	Primary vaccination. Successful. 1 and under 6 years.	Total of all ages.	Unknown.	Re-vaccination. Total number of operations.	Successful.	Unknown.	Percentage of successful cases in which the results were known. Primary vaccination.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases. Primary vaccination.	Re-vaccination.	Average annual number of persons successfully vaccinated during previous 5 years. Number.	Ratio per 1,000.	Average annual number of deaths from small-pox during previous 5 years. Number.	Ratio per 1,000.
1	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	3,934	9,135	606	2,040	1,647	131	84·6	86·3	...	5·3	6·4	...	...	...	...
2	2,736	8,420	482	4,083	3,235	331	87·3	86·2		4·8	8·1	...	...	...	...
3	3,724	7,346	688	2,475	1,659	450	86·2	81·9		7·5	18·2	...	...	...	...
4	2,775	6,823	448	4,375	3,176	368	81·3	79·3		5·1	8·4	...	...	...	...
5	3,658	8,454	526	2,746	2,143	251	81·4	85·9		4·8	9·1	...	...	...	...
6	3,843	6,816	365	1,668	1,314	127	88·6	85·3		4·5	7·6				
7	2,189	4,510	397	2,552	1,486	307	82·1	66·2		6·7	12·0				
Total	22,859	51,504	3,512	19,939	14,660	1,965	84·5	81·5	30·7	5·5	9·8	73,236	34·0	594	0·3
8	4,419	8,739	1,005	303	114	56	68·0	46·2	...	7·3	18·5	...	...	...	...
9	8,420	11,940	2,562	856	304	208	59·5	46·9		11·3	24·3	...	...	...	...
10	1,748	2,837	415	291	166	46	58·4	67·8		7·9	15·8	...	...	...	...
11	4,515	8,883	1,723	1,120	472	177	53·9	50·1		9·5	15·8	...	...	...	...
12	1,051	1,977	344	119	20	12	59·2	18·7		9·3	10·1	...	...	...	...
Total	20,153	34,376	6,049	2,689	1,076	499	59 7	49·1	23·1	9·5	18·6	53,958	35·2	1,006	0·7
13	6,697	17,682	520	3,919	3,555	68	90·5	92·3	...	2·6	1·7	...	...	...	...
14	8,960	15,520	156	8,725	8,089	44	91·7	93·2		0·9	0·5				
15	8,360	16,745	761	5,532	4,650	309	85·0	89·0		3·7	5·6				
Total	24,007	49,947	1,437	18,176	16,294	421	88·9	91·8	41·0	2·5	2·3	60,286	37·3	1,012	0·6
16	11,634	21,846	404	1,855	995	81	90·0	56·1	...	1·6	4·4	...	...	...	...
17	9,790	18 928	572	2,593	2,346	75	9[illegible]·5	93·2		2·7	2·9				
18	9,648	16,999	522	615	466	15	86·1	77·7		2·6	2·4				
Total	31,072	57,773	1,498	5,063	3,807	171	89·0	77·8	32·7	2 3	3·4	70,080	37·2	1,196	0·6
19	5,832	9,328	1,212	3,859	2,186	624	71·2	67·6	...	8·5	16·2	...	...	...	...
20	5,511	8,947	622	6,333	3,973	720	80·2	70 8		5·3	11·4				
21	4,901	7,935	1,106	3,018	1,625	400	66·9	62·1		8·5	13·3				
Total	16,244	26,210	2,940	13,210	7,784	1,744	72·6	67·9	26·3	7·5	13·2	38,687	29·9	1,025	0·8
22	12,684	23,581	1,961	5,367	4,178	432	87·4	84·7	...	6·8	8·0	...	...	...	...
...	664	1,439	83	7	7	...	93·6	100·0		5·1	...				
23	11,228	17,285	2,281	8,910	6,280	786	77·4	77·3		9·3	8·8				
24	8,949	17,537	1,249	7,334	5,794	605	89·6	86·1		6·0	8·2				
..	143	315	...	220	197	...	91·8	89·5		..	...				
25	5,374	9,531	422	1,717	1,000	150	91·9	63·8		3·9	8·7				
Total	39,042	69,688	5,996	23,555	17,456	1,973	85·9	80·9	35·5	6·9	8·4	97,593	39·8	697	0·2

A—VACCINE DEPARTMENT—*cont.*

Statement No. I showing the particulars of Vaccination in the Madras Presidency for the official year 1917–18—cont.

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated. Males.	Females.	Total.	Average number of persons vaccinated by each vaccinator.	Primary vaccination. Total number of operations.	Successful. Under 1 year.
1	2	3	4	5	6	7			8	9	10
		NORTHERN RANGE—*cont.*									
26	Koraput.	Jeypore Circle ...	...	...	11	8,454	8,250	16,704	1,519	17,084	2,621
27		Koraput do. ...	624,890	74	8	6,431	6,126	12,557	1,570	9,300	1,165
		Total of district ...	624,890	74	19	14,885	14,376	29,261	1,540	26,384	3,786
		Total of circles in the Northern range ...	11,531,763	...	264	243,746	215,370	459,116	1,739	404,676	114,198
		Total of Medical Subordinates.	...	...	...	3,767	290	4,057	...	15	7
1	Municipalities.	Anakāpalle	20,625	1,719	1	522	455	977	977	680	399
2		Berhampore	31,456	5,244	1	766	598	1,364	1,364	1,106	872
3		Bezwada	32,867	5,976	2	889	755	1,644	822	1,200	853
4		Bimlipatam	9,314	179	1	361	322	683	683	408	260
5		Chicacole	17,852	5,617	1	538	427	965	965	530	427
6		Cocanada	54,110	9,018	2	1,190	1,028	2,218	1,109	2,312	1,315
7		Ellore	37,819	12,606	2	1,909	1,265	3,174	1,587	2,507	1,542
8		Guntūr	42,625	9,134	2	2,445	1,467	3,912	1,956	1,618	1,297
9		Masulipatam	42,123	2,113	3	1,476	1,129	2,605	868	1,349	795
10		Narasaraopet	8,743	4,371	1	813	461	1,274	1,274	556	329
11		Nellore	33,246	2,078	1	1,397	684	2,081	2,081	1,073	555
12		Ongole	13,286	3,321	1	1,013	721	1,734	1,734	742	369
13		Parlākimedi	18,370	13,812	1	623	303	926	926	611	437
14		Peddapur	15,436	1,029	1	269	177	446	446	393	164
15		Rajahmundry	48,417	14,583	2	2,216	784	3,000	1,500	1,921	1,274
16		Tenali	18,195	6,998	1	747	551	1,298	1,298	751	477
17		Vizagapatam	43,413	8,349	2	1,423	1,219	2,642	1,321	1,363	704
18		Vizianagaram	37,550	7,510	2	2,756	2,208	4,964	2,482	2.251	1,047
		Total of Municipalities in the Northern Range.	525,447	...	27	21,353	14,554	35,907	1,330	21,371	13,116
		Grand Total of Northern range.	12,087,210	...	291	268,866	230,214	499,080	1,701	426,062	127,321
		CENTRAL RANGE.									
1	Anantapur.	Anantapur circle ...	954,766	142	9	6,503	6,424	12,927	1,436	12,535	6,307
2		Penukonda do. ...			9	7,840	7,516	15,356	1,706	15,572	7,591
		Total of district ...	954,766	142	18	14,343	13,940	28,283	1,571	28,107	13,898
3	Bellary.	Bellary circle	885,164	156	10	6,422	6,003	12,425	1,243	13,410	8.159
4		Hospet do.			10	5,640	5,471	11,111	1,111	11,513	7,727
		Total of district ...	* 885,164	156	20	12,062	11,474	23,536	1,177	24,923	15,886
5	Chingleput.	Chingleput Circle ...	1,340,518	436	4	9,209	9,130	18,339	4,585	18,326	8,183
6		Saidapet do. ...			4	8,916	8,872	17,788	4,447	15,610	5,841
7		Ponneri do. ...			4	9,872	8,996	18,868	4,717	18,730	7,619
		Total of district ...	1,340,518	436	12	27,997	26,998	54,995	13,749	52,666	21,643
8	Chittoor.	Chittoor Circle ...	1,206,892	215	10	8,744	7,420	16,164	1,616	15,483	5,252
9		Karvetnagar do. ..			13	10,093	9,604	19,697	1,515	19,094	8,359
		Total of district ...	1,206 892	215	23	18,837	17,024	35,861	1,565	34,577	13,611
10	Cuddapah.	Cuddapah circle ...	860,435	148	8	4,464	4,050	8,514	1,064	9,641	2,676
11		Proddatur do. ...			7	3,885	3,456	7,341	1,049	8,448	2,936
12		Sidhout do. ...			8	5,439	4,277	9,716	1,215	10,116	3,244
		Total of district ...	860,435	148	23	13,788	11,783	25,571	1,112	28,205	8,856

Circles.	Primary vaccination. Successful. 1 and under 6 years.	Total of all ages.	Unknown.	Re-vaccination. Total number of operations.	Successful.	Unknown.	Percentage of successful cases in which the results were known. Primary vaccination.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases. Primary vaccination.	Re-vaccination.	Average number of persons successfully vaccinated during previous 5 years. Number.	Ratio per 1,000.	Average number of deaths from small-pox during previous 5 years. Number.	Ratio per 1,000.
3	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
NORTHERN RANGE—*cont.*															
Jeypore Circle	8,119	12,333	694	1,528	952	198	81·3	71·6	...	4·1	13·0	...	...	...	...
Koraput do.	4,757	7,647	571	3,413	2,103	481	87·6	71·7	...	6·1	14·1	...	...	...	...
Total of district	12,876	20,980	1,265	4,941	3,055	679	83·5	71·7	38·5	4·8	13·7	25,180	40·3	...	...
Total of circles in the Northern range	166,253	310,478	22,697	87,573	64,132	7,452	81·3	80·0	32·4	5·6	8·5	419,020	36·2	5,530	0·5
Total of Medical Subordinates.	7	14	...	4,042	2,858	168	93·3	73·8	...	...	4·2	...	...	...	...
Anakāpalle	120	596	5	331	238	4	88·3	72·8	40 4	0·7	1 2	798	38·7	20	1·0
Berhampore	100	972	1	365	234	40	88·0	72·0	38·3	0 1	11·0	1,396	44·4	28	0·9
Bezwada	204	1,099	10	470	298	1	92·4	63·5	42 5	0·8	0·2	1,569	47·7	9	0·3
Bimlipatam	52	323	...	338	207	6	73·2	62·3	56 9	...	1·8	493	52·9	3	0·3
Chicacole	61	498	2	435	327	7	94·3	76·4	46 2	0·4	1·6	822	46·0	4	0·2
Cocanada	305	1,659	94	222	91	79	74·8	63·6	32·3	4·1	35·6	2,100	38·8	62	1·1
Ellore	751	2,316	11	693	375	81	93 6	54·1	71·9	0·4	11·7	2,893	76 5	49	1·3
Guntūr	137	1,442	...	2,445	1,530	369	89·1	73·7	69·7	...	15·1	2.520	59·1	87	2 0
Masulipatam	297	1,155	...	1,307	1,157	...	85·6	88·5	54 9	...	...	1,710	40·6	50	1·2
Narasaraopet	73	404	29	844	542	120	76·7	74·9	108·2	5·2	14·2	485	55·5	3	0·3
Nellore	183	758	28	1,140	451	246	72·5	50·4	36·4	2·6	21·6	1,343	40·4	14	0·4
Ongole	179	580	18	1,082	912	12	80·1	85·2	112·3	2·4	1 1	788	59·3	1	0 1
Parlākimedi	36	477	...	349	136	90	78·1	52·5	33·4	...	25·8	1,755	95·5	36	2·0
Peddapur	23	188	13	108	30	4	49·5	28·8	14·1	3·3	3·7	371	24·0	17	1 1
Rajahmundry	419	1,695	...	1,079	542	169	88·2	59·6	46·2	...	15·7	2,629	54·3	104	2·1
Tenali	191	677	4	605	481	41	90·6	85·7	63·6	0·5	6·8	767	42·2	4	0·2
Vizagapatam	275	1,055	8	1,433	474	230	77·9	39·4	35·2	0·6	16·1	1,519	35·0	14	0 3
Vizianagaram	213	1,419	57	3,048	1,841	196	64·7	64·6	86·8	2·5	6·4	3,209	85·5	3	0 1
Total of Municipalities in the Northern Range.	3,619	17,343	280	16,294	9,866	1,695	82·2	67·6	51·8	1·3	10·4	27,167	51·7	508	1·0
Grand Total of Northern range.	169,879	327,835	22,977	107,909	76,856	9,315	81·3	80·0	33·5	5·4	8·6	446,817	36·9	6,038	0·5
CENTRAL RANGE.															
Anantapur circle	4,870	11,307	132	577	454	17	91·2	81·1	...	1·1	2·9	...	...	...	...
Penukonda do.	5,771	13,646	378	589	357	19	89·8	62·6	...	2·4	3·2				
Total of district	10,641	24,953	510	1,166	811	36	90·4	71·8	27·0	1·8	3·1	27,727	29·0	654	0·7
Bellary circle	3,629	12,081	220	163	144	10	91·6	94.1	...	1·6	6·1	...	...	...	...
Hospet do.	2,510	10,666	169	443	397	16	94·0	92·9		1·5	3·6				
Total of district	6,139	22,747	389	606	541	26	92·7	93·4	26·3	1·6	4·3	28,972	32·7	1,032	1·2
Chingleput Circle	4,676	13,044	1,998	879	357	159	79·9	49·6	...	10·9	18·1	...	...	...	...
Saidapet do.	2,503	9,327	3,104	2,178	703	740	74·6	48·9		19·9	34·0				
Ponneri do.	5,667	13,295	2,235	652	243	165	80·6	49 9		11·8	25·3				
Total of district	12,846	35,666	7,337	3,709	1,303	1,064	78·7	49·3	27·6	13·9	28·7	34,343	25·6	789	0·6
Chittoor Circle	6,263	11,894	576	2,011	768	295	79·8	44·8	...	3·7	14·7	...	...	...	...
Karvetnagar do.	8,309	17,159	725	1,240	785	158	93·4	72·5	...	3·8	12·7				
Total of district	14,572	29,053	1,301	3,251	1,553	453	87·3	55·5	25·0	3·8	13 9	33,407	27·3	948	0·8
Cuddapah circle	3,427	6,553	560	243	139	17	72·2	61·1	...	5·8	7·0	...	...	...	...
Proddatur do.	2,911	6,266	390	248	111	44	77·8	54·4	...	4·6	17·7				
Sidhout do.	4,488	8,131	588	1,210	977	59	85·3	84·9	...	5·8	4·9				
Total of district	10,826	20,950	1,538	1,701	1,227	120	78·6	77·6	25 3	5·5	7·1	23,657	32.7	591	0·7

* Excludes Sandur (13,526).

A—VACCINE DEPARTMENT—*cont.*

Statement No. I showing the Particulars of Vaccination in the Madras Presidency for the official year 1917–18—cont.

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated. Males.	Females.	Total.	Average number of persons vaccinated by each vaccinator.	Primary vaccination. Total number of operations.	Successful. Under 1 year.	1 and under 6 years.	Total of all ages.	Unknown.	Re-vaccination. Total number of operations.	Successful.	Unknown.	Percentage of successful cases in which the results were known. Primary vaccination.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases. Primary vaccination.	Re-vaccination.	Average number of persons successfully vaccinated during previous 5 years. Number.	Ratio per 1,000.	Average number of deaths from small-pox during previous 5 years. Number.	Ratio per 1,000.
1	2	3	4	5	6	7			8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
		CENTRAL RANGE—*cont.*																								
13	Kurnool.	Cumbum circle	...	...	13	7,872	5,413	13,285	1,022	11,964	4,879	5,742	11,406	100	2,458	2,208	113	96·1	94·1	...	0·8	4·6	...	...	...	...
14		Kurnool do.	892,929	118	12	8,004	6,990	14,994	1,249	14,028	7,571	6,049	13,656	53	1,448	1,352	3	97·7	93·6		0·4	0·2				
		Total of district ...	* 892,929	118	25	15,876	12,403	28,279	1,131	25,992	12,450	11,791	25,062	153	3,906	3,560	116	97·0	93·9	32·1	0·6	3·0	32,809	36·7	816	0·9
15	North Arcot.	Vellore circle	1,825,742	371	3	7,259	6,728	13,987	4,662	14,060	7,597	3,260	10,909	1,493	891	475	125	86·8	62·0	...	10·6	14·0	...	...	...	...
16		Rānipēttai circle ...			3	7,211	6,856	14,067	4,689	14,084	5,443	3,889	9,442	2,350	1,249	381	403	80·5	45·3		16·7	32·3				
17		Polūr do. ...			3	7,392	7,330	14,722	4,907	15,623	5,8 7	5,489	11,507	1,867	181	94	54	83·6	74·0		11·9	29·8				
18		Tiruppattūr do. ...			10	10,498	9,961	20,459	2,046	19,494	5,815	9,771	16,336	1,376	1,692	1,060	219	90·2	72·0		7·1	12·9				
		Total of district ...	1,825,742	371	19	32,360	30,875	63,235	3,328	63,261	24,682	22,409	48,194	7,086	4,013	2,010	801	85·8	62·6	27·5	11·2	20·0	50,611	27·7	1,182	0·6
19	Salem.	Salem circle	1,707,527	256	6	6,441	6,245	12,686	2,114	12,790	5,958	4,974	11,106	533	524	388	39	90·6	80·0	...	4·5	7·4	...	...	...	...
20		Sankari do.			10	8,133	8,036	16,169	1,617	17,188	5,465	8,235	14,116	566	741	570	50	84·9	82·5		3·3	6·7				
21		Hosūr do.			8	8,345	7,865	16,210	2,026	15,993	7,683	6,815	14,652	229	1,026	900	51	92·9	92·3		1·4	4·9				
		Total of district ...	1,707,527	256	24	22,919	22,146	45,065	1,878	45,971	19,106	20,024	39,874	1,328	2,291	1,858	140	89·3	86·3	24·4	2·9	6·1	56,616	33·2	866	0·5
22	South Arcot.	Cuddalore circle ...	2,284,665	545	4	9,357	9,147	18,504	4,626	15,143	8,840	1,991	10,918	1,900	4,568	3,238	376	82·4	77·2	...	12·5	8·2	...	...	...	...
23		Vriddhāchalam circle ...			7	8,772	7,641	16,413	2,345	16,095	5,392	5,386	11,431	1,423	2,010	1,142	396	77·9	70·8		8·8	19·7				
24		Tirukkōyilūr do. ...			6	7,515	6,112	13,627	2,271	13,826	3,614	4,777	9,651	1,773	1,742	1,039	327	80·1	73·4		12·8	18·8				
25		Tindivanam do. ...			5	7,659	6,372	14,031	2,806	13,303	4,761	4,304	9,518	1,626	1,329	611	325	81·5	60·9		12·2	24·5				
26		Villupuram do. ...			4	7,531	7,632	15,163	3,791	14,409	7,076	1,542	8,784	2,913	2,094	1,197	390	76·4	70·2		20·2	18·6				
		Total of district ...	2,284,665	545	26	40,834	36,904	77,738	2,990	72,776	29,683	18,000	50,310	9,635	11,743	7,227	1,814	79·7	72·8	25·2	13·2	15·4	60,436	26·5	1,575	0·7
		Total of circles in the Central Range.	11,958,638	...	190	199,016	183,547	382,563	2,019	376,478	159,815	127,248	296,809	29,277	32,386	20,090	4,570	85·5	72·2	26·4	7·8	14·1	353,579	29·5	8,454	0·7
		Total of Medical Subordinates.	...	...	...	1,161	1	1,162	...	1	1	...	1	...	1,161	650	7	100·0	56·3	...	...	0·6	...	...	...	...
	Municipalities.	Adōni	31,645	2,281	1	493	396	889	889	854	716	25	744	104	35	28	7	99·2	100·0	24·4	12·2	20·0	1,200	37·9	91	2·9
1		Anantapur	8,457	940	1	368	172	540	540	328	166	100	281	.	212	161	1	85·7	76·3	52·3	...	0·5	286	33·8	6	0·7
2		Bellary	34,956	6,991	3	2,119	1,117	3,236	1,079	2,611	1,918	433	2,353	...	636	490	...	90·1	77·0	81·3	...	...	2,941	84·1	75	2·2
3		Chidambaram	21,327	10,663	1	631	353	984	984	627	441	74	551	17	413	309	51	90·3	85·4	40·3	2·7	12·3	894	41·9	30	1·4
4		Chingleput	11,626	9,301	1	539	272	811	811	520	375	80	462	8	291	194	43	90·2	78·2	56·4	1·5	14·8	676	58·1	2	0·2
5		Chittoor	15 149	2,019	1	549	326	875	875	683	347	257	612	4	224	15	142	90·1	18·3	41·4	0·6	63·4	...	...	...	...
6		Conjeeveram	53,864	13,466	2	1,170	944	2,114	1,057	1,818	1,450	170	1,637	70	364	266	39	93·6	81·4	35·5	3·8	10·7	1,796	33·3	21	0·4
7		Cuddalore	56,574	4,254	2	1,486	1,268	2,754	1,377	2,368	1,862	412	2,291	9	386	320	5	97·1	83·9	46·0	0·2	1·3	2,414	42·7	19	0·3
8		Cuddapah	17,807	903	1	773	307	1,080	1,080	586	372	80	462	25	528	180	41	82·4	36·9	36·1	4·3	7·8	681	38·2	8	0·4
9		Gudiyāttam	23,390	19,655	1	481	371	852	852	811	756	45	803	3	49	17	29	99·4	85·0	35·1	0·4	6·1	658	28·1	30	1·3
10		Hospet	17,671	5,644	1	427	450	877	877	880	662	156	818	...	5	5	...	92·9	100·0	46·6	...	...	673	38·1	5	0·3
11		Kurnool	26,040	5,208	1	498	375	873	873	800	555	129	750	16	102	9	71	95·7	29·0	29·1	2·0	69·6	1,181	45·3	12	0·5
12		Madras	518,660	19,209	† 10	21,278	13,930	35,208	3,521	23,410	19,889	2,356	22,304	717	11,971	5,276	2,848	98·3	57·8	53·2	3·1	23·8	27,797	53·6	157	0·3
13		Nandyal	16,230	3,246	1	399	339	738	738	704	391	256	656	...	61	56	...	93·1	91·8	43·9	...	...	764	47·1	34	2·1
14		Proddatūr	15,756	3,939	1	352	293	645	645	622	394	88	488	1	23	15	1	78·6	68·2	31·9	0·2	4·3	360	22·2	...	...
15		Salem	59,153	13,984	2	1,467	1,238	2,705	1,353	2,456	2,219	123	2,342	...	258	136	...	95·4	52·7	41·9	...	...	2,868	48·5	92	1·6
16		Tiruppattur	10,470	4,188	1	547	343	890	890	651	633	7	650	..	239	231	...	99·8	96·7	84·1	...	...	565	54·0	29	2·8
17		Tirupati	16,701	5,000	1	239	218	457	457	431	387	17	406	7	26	13	11	95·8	86·7	25·1	1·6	42·3	508	30·4	5	0·3
18		Tiruvannāmalai ...	21,244	1,931	1	583	446	1,029	1,029	917	615	172	835	...	112	81	6	91·0	76·4	43·1	...	5·4	857	40·3	16	0·8
19		Vāniyambādi	20,406	5,830	1	440	399	839	839	837	698	129	834	1	3	1	...	99·7	33·3	40·9	0·1	...	636	31·1	15	0·7
20		Vellore	49,746	8,102	2	1,381	1,151	2,532	1,266	2,204	1,573	524	2,108	77	328	39	287	99·1	95·1	43·2	3·4	87·5	1,907	38·3	40	0·8
21		Walajapet	9,962	9,962	1	303	196	499	499	424	324	22	350	1	112	54	19	82·7	58·1	40·6	0·2	16·9	411	41·3	4	0·4
		Total of Municipalities.	1,056,834	...	37	36,523	24,904	61,427	1,660	45 542	36,743	5,655	42,737	1,060	16,378	7,896	3,601	96·1	61·8	47·9	2·3	22·0	49,858	47·5	691	0·7
1	Military Cantonments.	Bangalore	100,834	7,447	2	1,026	137	1,163	582	202	121	38	168	...	961	422	365	83·2	70·8	...	...	38·0	596	...	55	5·0
2		Secunderabad	103,879	5,467	4	5,243	4,508	9,751	2,438	3,955	2,154	709	3,329	52	6,243	2,341	176	85·3	38·6	...	1·3	2·9	6,649	..	17	0·2
		Total of Cantonments ...	204,713	6,291	6	6,269	4,645	10,914	1,817	4,157	2,275	747	3,497	52	7,204	2,763	541	85·2	41·5	30·6	1·0	7·5	7,245	35·4	36	2·6
		Grand Total of Central Range.	13,015,472	...	233	242,969	213,097	456,066	1,952	426,178	198,834	133,650	343,044	30,389	57,129	31,399	8,719	86·7	64·8	28·7	7·1	15·3	410,786	31·5	9,145	0·7

* Excludes Banganapalli (39,344).

† Medical Vaccinators.

A—VACCINE DEPARTMENT—*cont.*

Statement No. 1 showing the Particulars of Vaccination in the Madras Presidency for the official year 1917–18—cont.

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated. Males.	Females.	Total.	Average number of persons vaccinated by each vaccinator.	Primary: Total number of operations.	Primary: Under 1 year.
1	2	3	4	5	6	7			8	9	10
		SOUTHERN RANGE.									
1	Coimbatore.	North Coimbatore circle.	2,032,856	266	10	10,444	10,033	20,477	2,047	18,071	5,659
2		East do. do.			9	11,742	11,102	22,844	2,538	22,126	5,409
3		South do. do.			7	9,575	8,979	18,554	2,650	14,396	4,530
4		Central do. do.			9	11,386	10,662	22,048	2,449	21,839	6,229
		Total of district ...	2,032,856	266	35	43,147	40,776	83,923	2,397	76,432	21,827
5	Madura.	Dindigul circle ...	1,718,613	354	4	9,026	8,614	17,640	4,410	18,911	9,014
6		Madura do. ...			4	10,480	8,997	19,477	4,869	18,121	6,972
7		Usilampatti do. ...			4	8,988	8,265	17,253	4,313	17,407	7,338
		Total of district ...	1,718,613	354	12	28,494	25,876	54,370	4,530	54,439	23,324
8	Malabar.	Tellicherry circle ...	2,809,117	485	10	16,335	13,835	30,170	3,017	21,640	7,908
9		Calicut do. ...			8	14,908	13,479	28,387	3,548	21,399	5,812
10		Palghat do. ...			12	20,454	20,192	40,646	3,387	33,090	13,191
11		Malappuram do. ...			10	17,212	16,214	33,426	3,342	28,618	10,995
		Total of district ...	* 2,809,117	485	40	68,909	63,720	132,629	3,316	104,747	37,906
12	The Nilgiris.	Nilgiris circle	89,856	89	3	3,015	1,949	4,964	1,654	3,948	1,533
		Total of district ...	89,856	89	3	3,015	1,949	4,964	1,654	3,948	1,533
13	Rāmnād.	Srivilliputtūr circle ...	1,608,032	337	9	9,744	8,425	18,169	2,018	17,745	7,913
14		Rāmnād circle			10	8,863	8,170	17,033	1,703	16,123	6,430
15		Tiruppattūr circle ...			12	8,723	8,233	16,956	1,413	16,684	7,314
		Total of district ...	1,608,032	337	31	27,330	24,828	52,158	1,682	50,552	21,657
16	South Kanara.	Northern circle ...	1,142,860	285	8	7,817	7,190	15,007	1,876	14,400	4,746
17		Central do. ...			8	6,705	6,209	12,914	1,614	13,737	6,374
18		Southern do. ...			10	8,223	8,113	16,336	1,633	12,659	4,808
		Total of district ...	† 1,142,860	285	26	22,745	21,512	44,257	1,702	40,796	15,928
19	Tanjore.	Tanjore circle ...	2,108,014	578	8	7,776	6,940	14,716	1,840	13,969	4,420
20		Negapatam do. ...			10	8,049	7,028	15,077	1,508	14,815	5,021
21		Pattukkōttai do. ...			11	10,035	9,178	19,213	1,747	18,056	4,591
22		Kumbakōnam do. ...			12	9,745	9,406	19,151	1,596	17,600	5,025
		Total of district ...	2,108,014	578	41	35,605	32,552	68,157	1,662	64,440	19,057
23	Tinnevelly.	Shermadevi circle ...	1,660,720	381	8	10,721	9,651	20,372	2,546	23,697	9,797
24		Srīvaikuntam do. ...			9	12,162	10,641	22,803	2,533	24,149	9,990
25		Koilpatti do. ...			8	11,258	7,949	19,207	2,401	19,094	7,574
		Total of district ...	1,660,720	381	25	34,141	28,241	62,382	2,495	66,940	27,361
26	Trichinopoly.	Trichinopoly circle ...	1,941,044	393	12	10,869	10,396	21,265	1,772	21,836	7,967
27		Ariyalūr do. ...			8	8,113	7,960	16,073	2,009	16,347	5,173
28		Nāmakkal do. ...			9	9,662	9,526	19,188	2,112	19,392	6,609
		Total of district ...	‡ 1,941,044	393	29	28,644	27,882	56,526	1,949	57,575	19,749
		Total of circles in the Southern range.	15,111,112	...	242	292,030	267,336	559,366	2,311	519,869	188,342
		Total of Medical Subordinates.	...	...	...	5,649	164	5,813	...	181	30

Number.	Circles.	Primary vaccination: Successful: 1 and under 6 years.	Successful: Total of all ages.	Unknown.	Re-vaccination: Total number of operations.	Successful.	Unknown.	Percentage of successful cases in which the results were known: Primary vaccination.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases: Primary vaccination.	Re-vaccination.	Average number of persons successfully vaccinated during previous 5 years: Number.	Ratio per 1,000.	Average number of deaths from small-pox during previous 5 years: Number.	Ratio per 1,000.
1	3	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	North Coimbatore circle.	5,155	11,086	1,101	3,233	1,379	403	65·0	49·0	..	6·0	12·0	...	...	...	...
2	East do. do.	6,649	12,466	1,375	1,336	660	137	60·7	55·0		6·2	10·2				
3	South do. do.	5,923	10,806	760	4,509	3,740	135	79·3	85·5		5·3	3·0				
4	Central do. do.	7,139	14,043	2,005	630	397	55	70·8	69·0		9·2	8·7				
	Total of district ...	24,866	48,401	5,241	9,708	6,176	730	68·0	68·8	26·6	6·9	7·5	50,060	24·3	1,369	1·0
5	Dindigul circle ...	3,271	12,446	2,453	1,211	281	218	75·6	28·3	...	12·9	18·0	...	...	...	...
6	Madura do. ...	5,118	12,593	3,117	2,105	671	449	83·9	40·5		17·2	21·3				
7	Usilampatti do. ...	3,494	11,030	3,086	349	142	128	77·0	64·3		17·7	36·7				
	Total of district ...	11,883	36,069	8,656	3,665	1,094	795	78·7	38·1	21·3	15·9	21·7	40,050	23·0	670	0·4
8	Tellicherry circle ...	6,773	17,609	845	8,545	4,627	224	84·7	55·6	...	3·9	2·6	...	...	...	...
9	Calicut do. ...	6,487	15,449	1,362	7,651	2,931	402	77·1	40·4		6·3	5·2				
10	Palghat do. ...	5,902	19,958	4,034	9,622	4,499	1,901	68·7	58·3		12·2	19·8				
11	Malappuram do. ...	7,524	21,599	1,875	5,340	3,428	394	80·7	69·3		6·6	7·3				
	Total of district ...	26,686	74,615	8,116	31,158	15,485	2,921	77·2	54·8	22·1	7·7	9·3	125,816	44·7	443	0·2
12	Nilgiris circle	1,789	3,697	17	1,024	976	2	94·1	95·4	...	0·4	0·2	...	...	...	...
	Total of district ...	1,789	3,697	17	1,024	976	2	94·1	95·4	52·0	0·4	0·2	4,471	49·7	17	0·2
13	Srivilliputtūr circle ...	5,731	14,698	626	1,067	676	125	85·9	71·8	...	35	11·7	...	..	...	...
14	Rāmnād circle	8,142	15,478	187	917	776	83	96·0	92·0		1·1	9·0				
15	Tiruppattūr circle ...	7,589	16,189	178	405	306	66.	97·0	90·0		1·0	16·0				
	Total of district ...	21,462	46,365	991	2,389	1,758	274	93·5	83·1	29·5	2·0	11·4	53,102	32·1	400	0·2
16	Northern circle ...	6,025	11,693	753	1,431	782	98	85·7	58·7	...	5·2	6·8	...	...	...	...
17	Central do. ...	4,176	10,888	379	578	339	41	81·5	63·1		2·8	7·1				
18	Southern do. ...	4,643	10,346	369	3,967	2,461	228	84·2	65·8		2·9	5·7				
	Total of district ...	14,844	32,927	1,501	5,976	3,582	367	83·1	63·8	32·9	3·7	6·1	39,681	34·7	332	0·3
19	Tanjore circle ...	7,669	13,142	129	903	840	26	95·0	95·8	.	0·9	2·9	...	...	...	...
20	Negapatam do. ...	7,594	14,019	289	2,015	1,842	70	96·5	94·7		1·9	3·5				
21	Pattukkōttai do. ...	9,770	16,029	762	1,504	1,255	151	92·7	92·8		4·2	10·0				
22	Kumbakōnam do. ...	8,994	15,076	992	2,107	1,542	296	90·7	85·9		5·6	14·0				
	Total of district ...	34,027	58,266	2,172	6,529	5,479	543	93·2	91·5	29·9	3·3	8·3	60,208	27·2	946	0·4
23	Shermadevi circle ...	5,842	16,860	1,559	1,305	681	257	76·2	64·9	...	6·6	19·7	...	...	...	..
24	Srīvaikuntam do. ...	6,985	18,119	1,285	2,303	1,626	274	79·2	80·1		5·3	11·9				
25	Koilpatti do. ...	6,251	14,941	1,159	3,145	2,538	264	83·9	88·0		6·1	8·4				
	Total of district ...	19,078	49,920	4,003	6,753	4,845	795	79·3	81·3	33·7	5·9	11·7	61,008	36·7	287	0·2
26	Trichinopoly circle ...	9,767	18,321	1,016	306	239	17	87 9	82·6	...	4·6	5·5	...	...	...	...
27	Ariyalūr do. ...	7,160	12,676	1,077	1,010	714	136	83·0	81·6		6·5	13·4				
28	Nāmakkal do. ...	8,277	15,670	944	275	217	37	84·9	99·5		4·8	13·4				
	Total of district ...	25,204	46,667	3,037	1,591	1,170	190	85·5	83·5	24·6	5·2	11·9	53,560	27·5	790	0·5
	Total of circles in the Southern range.	179,839	396,927	33,734	68,793	40,565	6,617	81·6	65·2	28·7	6·4	9·6	487,956	32·1	5,255	0·3
	Total of Medical Subordinates.	9	88	2	5,632	3,744	370	48·6	66·4	...	1·1	6·5	...	...	...	...

* Excludes Laccadives (10,600). † Excludes Amindivi Islands (3,955). ‡ Excludes Pudukottah (411,886).

A—VACCINE DEPARTMENT—*cont.*

Statement No. 1 showing the Particulars of Vaccination in the Madras Presidency for the official year 1917–18—cont.

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated. Males.	Females.	Total.	Average number of persons vaccinated by each vaccinator.	Primary: Total number of operations.	Primary: Under 1 year.
1	2	3	4	5	6	7			8	9	10
		SOUTHERN RANGE —*cont.*									
1	Municipalities.	Bōdināyakanūr ...	20,205	20,205	3	611	540	1,151	384	1,266	683
2		Calicut	78,417	7,292	3	5,471	2,471	7,942	2,647	4,110	2,184
3		Cannanore	28,957	5,791	1	1,939	1,070	3,009	3,009	1,092	771
4		Cochin	20,023	20,023	1	2,445	1,394	3,839	3,839	1,101	597
5		Coimbatore	47,007	11,060	3	1,561	1,130	2,691	897	2,251	1,230
6		Coonoor	9,933	1,710	1	711	539	1,250	1,250	506	247
7		Dindigul	25,052	9,635	1	820	584	1,404	1,404	1,046	835
8		Dhārāpuram	20,000	8,000	1	319	307	626	626	680	354
9		Erode	16,701	16,701	1	479	378	857	857	819	377
10		Kārūr	17,674	8,837	1	434	295	729	729	650	540
11		Kodaikānal	2,906	528	1	156	136	292	292	191	144
12		Kumbakōnam	64,647	14,628	3	1,410	1,024	2,434	811	2,052	1,498
13		Madura	134,130	5,086	17	19,451	9,014	28,465	1,581	14,929	7,101
14		Mannārgudi	21,398	3,566	1	528	369	897	897	725	545
15		Mangalore	48,412	9,680	2	1,765	1,349	3,114	1,557	2,751	1,320
16		Māyavaram	27,121	9,040	1	752	507	1,259	1,259	1,059	837
17		Negapatam	60,168	11,638	3	2,929	1,671	4,600	1,533	3,655	1,876
18		Ootacamund	18,829	1,448	2	705	555	1,260	630	705	532
19		Palamcottah	44,909	11,227	2	1,543	824	2,367	1,183	1,668	1,137
20		Palghat	44,319	4,185	2	1,373	1,028	2,401	1,201	1,947	1,149
21		Periyakulam	18,715	18,715	1	496	415	911	911	812	722
22		Palni	13,211	7,549	1	893	402	1,295	1,295	728	534
23		Srīrangam	24,799	3,543	1	698	591	1,289	1,289	1,228	734
24		Srīvilliputtūr	29,066	20,761	1	619	522	1,141	1,141	1,152	1,000
25		Tanjore	60,341	805	4	2,291	1,254	3,545	886	2,531	1,471
26		Tellicherry	29,258	11,703	2	906	674	1,580	790	764	679
27		Tinnevelly	44,805	7,469	2	1,216	969	2,185	1,092	2,090	1,507
28		Trichinopoly	123,512	14,899	3	2,866	2,193	5,059	1,686	4,445	2,958
29		Tiruvālūr	21,000	2,100	1	348	269	617	643	597	443
30		Tuticorin	40,185	11,481	2	1,456	961	2,417	1,208	1,137	1,016
31		Virudupatti	21,355	7,118	1	843	707	1,550	1,550	1,409	845
		Total of Municipalities.	1,177,055	...	71	58,034	34,142	92,176	1,298	60,096	35,866
		Grand Total of Southern Range	16,288,167	...	313	355,713	301,642	657,355	2,082	580,146	224,238
		Grand Total ...	*41,390,849	311	837	867,548	744,953	1,612,501	†1,913	1,432,386	550,393

Number.	Primary vaccination. Successful. 1 and under 6 years.	Total of all ages.	Unknown.	Re-vaccination. Total number of operations.	Successful.	Unknown.	Percentage of successful cases in which the results were known. Primary vaccination.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases. Primary vaccination.	Re-vaccination.	Average number of persons successfully vaccinated during previous 5 years. Number.	Ratio per 1,000.	Average number of deaths from small-pox during previous 5 years. Number.	Ratio per 1,000.
	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	453	1,147	...	28	25	...	96·0	89·2	58·0	...	...	509	25·1	2	0·1
2	881	3,638	5	3,944	3,186	35	88·6	81·5	87·2	0·1	0·9	6,478	82·6	53	1·0
3	244	1,025	6	2,199	1,328	85	94·4	62·8	81·2	0·5	3·9	1,736	59·9	81	3·0
4	196	930	37	2,803	567	387	87·4	23·5	74·7	3·4	13·8	1,206	60·2	14	1·0
5	388	1,700	86	534	175	62	78·5	37·1	39·8	3·8	11·6	1,785	37·9	103	2·1
6	221	468	1	744	593	6	92·7	80·4	106·8	0·2	0·8	594	59·8	2	0·2
7	73	940	25	384	301	21	92·1	82·9	49·5	2·4	5·5	1,073	42·8	2	0·1
8	79	434	54	11	6	...	63·8	54·5	22·0	7·9	...	61	30·5	2	0·1
9	164	543	112	65	29	19	76·8	63·0	34·2	13·7	29·2	772	40·2	26	1·6
10	49	613	...	101	81	4	94·3	83·5	39·2	...	3·9	559	31·6	9	0·5
11	25	189	...	101	88	...	99·0	87·0	95·3	...	...	128	44·0	...	...
12	266	1,776	8	389	264	22	86·8	71·9	31·5	0·4	5·7	1,943	30·1	42	0·7
13	6,042	13,395	183	14,977	10,256	430	90·8	70·5	176·2	1·2	3·0	10,809	80·5	128	1·0
14	87	654	...	180	143	...	90·2	79·4	37·2	...	...	790	36·9	17	0·8
15	1,125	2,676	3	363	263	22	97·4	77·1	60·7	0·1	6·1	2,566	53·0	1	...
16	71	919	...	293	179	15	86·8	61·1	40·4	...	5·1	1,154	42·5	11	0·4
17	1,375	3,354	1	945	739	8	91·8	78·9	67·5	...	0·8	4,058	67·4	36	0·6
18	71	646	13	561	442	45	93·4	65·7	57·7	1·8	8·0	1,291	68·5	2	0·1
19	206	1,349	1	917	515	110	80·9	63·8	41·5	0·1	12·0	1,980	44·1	9	0·2
20	254	1,449	...	687	342	...	74·4	49·8	40·4	...	...	1,987	44·8	5	0·1
21	56	785	...	99	99	...	96·7	100·0	47·2	...	...	807	43·1	10	0·5
22	145	680	...	567	456	35	93·4	85·7	85·9	...	6·2	782	59·1	8	0·6
23	375	1,174	31	61	50	10	98·1	98·0	49·3	2·5	16·4	1,206	48·6	17	0·7
24	57	1,064	...	73	62	...	92·4	84·9	38·7	...		1,058	36·4	...	...
25	619	2,415	18	1,064	792	4	96·1	74·7	53·1	0·7	0·4	3,341	55·3	79	1·4
26	19	702	...	823	286	8	91·9	35·1	33·6	...	1·0	1,221	41·6	43	1·5
27	203	1,771	21	317	266	3	85·6	84·7	45·4	1·0	0·1	2,117	47·2	11	0·2
28	1,218	4,330	31	614	479	71	98·9	88·2	38·9	0·7	11·4	5,662	45·8	120	1·0
29	86	548	...	46	46	...	91·8	100·0	28·2	...	...	326	15·5	2	0·1
30	71	1,087	2	1,284	1,094	71	95·8	90·2	54·2	0·2	5·5	2,908	72·3	6	0·1
31	310	1,171	86	255	165	42	88·5	77·4	62·5	6·1	16·4	223	10·4	2	0·1
Total of Municipalities	15,429	53,572	724	35,429	23,317	1,515	89·1	65·8	65·3	1·2	4·2	61,130	65·3	845	0·7
Grand Total of Southern Range	195,277	450,587	34,460	109,854	67,626	8,502	82·5	66·6	...	5·9	7·7	549,086	...	6,100	0·3
Grand Total	498,806	1,121,466	87,826	274,892	175,881	26,536	83·4	70·8	31·2	6·1	9·6	1,406,689	33·8	21,283	0·5

* Excludes the population of Bangalore and Secunderabad Cantonments.

† In finding out the average number of persons vaccinated, the total work of medical subordinates is excluded.

Note.—(1) Difference between number of operations and number of persons vaccinated, equals 94,777 which represents secondary operations.

(2) This statement does not include the statistics of dispensary vaccination which are exhibited separately in statement No. III.

N.B.—In calculating the percentage of success shown in this statement and statement No. III, unknown cases have not been taken into account.

SUMMARY OF STATEMENT No. I.

—	Total number of persons vaccinated. Primary.	Re-vaccination.	Total number of operations performed. Primary.	Re-vaccination.	Percentage of successful cases in which the results were known. Primary.	Re-vaccination.	Average number of persons vaccinated by each vaccinator. Vaccinators employed.	Persons vaccinated by each vaccinator.	Number of children successfully vaccinated. Under one year.	One and under six years.	Ratio of successful vaccination per 1,000 of population.	Total cost of department.	Average cost of each successful case.
By Special staff (statement No. I).	1,337,669	274,832	1,432,386	274,892	83·4	70·8	837	1,913	550,393	498,806	31·2	345,890 4 3	0 4 3
By Dispensary staff (statement No. III).	191	106	191	106	99·0	87·6	...	...	144	25	...	...	...
By other agencies, if any.	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	1,337,860	274,938	1,432,577	274,998	83·4	70·8	837	1,913	550,537	498,831	31·2	‡345,890 4 3	0 4 3

‡ Exclusive of the pay and allowances of the Inspectors of Vaccination and Deputy Sanitary Commissioners, Madras.

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A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1917–18.

Number.	Districts.	Circles.	Expenditure. Inspector of Vaccination and Deputy Sanitary Commissioner.	Pay.	Deputy Inspectors. First grade.	Second grade.	Third grade.	Pay.	Vaccinators. First class.	Second class.	Probationers.	Pay.	Peons, etc. Number.	Pay.	Total pay of establishment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		NORTHERN RANGE.		RS. A. P.				RS. A. P.				RS. A. P.		RS. A. P.	RS. A. P.
1	Ganjām.	Berhampur circle	...	...	...	...	1	448 0 0	3	5	1	1,736 1 7	1	99 8 0	2,283 9 7
2		Chicacole do.	...	...	1	...	...	860 14 5	2	6	1	1,384 14 10	1	99 8 0	2,345 5 3
3		Aska circle	...	...	...	...	1	471 3 8	2	4	2	1,103 10 6	1	99 8 0	1,674 6 2
4		Parlākimedi circle	...	...	1	...	...	820 0 0	1	7	...	1,222 3 0	1	97 0 8	2,139 3 8
5		Purushottapur circle	...	...	...	...	1	480 0 0	3	5	...	1,769 0 10	1	99 8 0	2,348 8 10
6		Ganjām Hill tracts, North	...	...	...	...	1	587 2 3	2	6	...	1,057 0 10	1	92 13 9	1,737 0 10
7		Ganjām Hill tracts, South	...	...	...	...	1	660 0 0	2	2	3	1,156 6 11	1	105 1 5	1,921 8 4
		Total of district ...	...	...	2	...	5	4,327 4 4	15	35	7	9,429 6 6	7	692 15 10	14,449 10 8
8	Gōdāvari.	Cocanada circle	...	...	...	...	1	544 10 8	4	3	...	1,206 0 7	1	102 0 0	1,852 11 3
9		Rajahmundry do.	...	...	...	...	1	580 5 8	4	5	...	1,395 4 4	1	102 0 0	2,077 10 0
10		Polavaram do.	...	...	...	...	1	644 11 4	2	4	...	948 3 0	1	113 5 11	1,706 4 3
11		Peddapur do.	...	...	...	...	1	490 6 8	4	6	...	1,601 13 5	1	97 14 3	2,190 2 4
12		Bhadrāchalam do.	...	...	...	...	1	651 6 11	2	3	1	1,129 13 2	1	114 0 0	1,895 4 1
		Total of district ...	...	...	...	...	5	2,911 9 3	16	21	1	6,281 2 6	5	529 4 2	9,721 15 11
13	Guntūr.	Guntūr circle	...	...	1	...	...	898 12 1	3	4	3	1,174 14 7	1	102 0 0	2,175 10 8
14		Narasaraopet circle	...	...	...	...	1	480 0 0	2	3	5	1,127 10 7	1	84 0 0	1,691 10 7
15		Bāpatla circle	...	...	...	...	1	739 11 6	4	3	4	1,366 0 1	1	102 0 0	2,207 11 7
		Total of district ...	...	...	1	...	2	2,118 7 7	9	10	12	3,668 9 3	3	288 0 0	6,075 0 10

Number.	Districts.	Circles.	Inspector of Vaccination and Deputy Sanitary Commissioner.	Pay.	First grade.	Second grade.	Third grade.	Pay.	First class.	Second class.	Probationers.	Pay.	Number.	Pay.	Total pay of establishment.
16	Kistna.	Ellore circle	...	...	...	1	...	720 0 0	1	2	13	2,273 12 6	1	102 0 0	3,095 12 6
17		Masulipatam circle	...	...	1	...	...	840 0 0	4	3	7	2,256 13 4	1	102 0 0	3,198 13 4
18		Narasapur do.	...	...	...	...	1	423 12 0	4	2	7	2,328 14 2	1	92 1 4	2,844 11 6
		Total of district ...	...	...	1	1	1	1,983 12 0	9	7	27	6,859 8 0	3	296 1 4	9,139 5 4
19	Nellore.	Kavali circle	...	...	...	...	1	725 2 7	1	3	6	1,285 12 6	1	84 0 0	2,094 15 1
20		Gudur do.	...	...	...	...	1	707 5 11	3	1	8	1,688 2 0	1	96 7 11	2,491 15 10
21		Kanigiri do.	...	...	...	1	...	1,110 0 0	3	5	2	2,012 9 5	1	94 10 10	3,217 4 3
		Total of district ...	...	...	...	1	2	2,542 8 6	7	9	16	4,986 7 11	3	275 2 9	7,804 3 2
22	Vizagapatam.	Vizagapatam circle	...	...	...	...	1	540 0 0	6	6	2	1,889 9 0	1	76 6 8	2,505 15 8
...		Government vaccinators (Gudem Hills)	...	...	...	...	...	...	...	2	...	345 1 7	...	...	345 1 7
23		Vizianagram circle	...	...	1	...	...	840 0 0	4	9	1	1,794 10 7	1	77 8 0	2,712 2 7
24		Pārvatīpuram do.	...	...	...	1	...	760 11 2	3	9	2	1,665 5 0	1	84 0 0	2,510 0 2
...		Government vaccinators, Palkonda Agency	...	...	...	...	...	...	...	1	...	118 0 0	...	...	118 0 0
25		Gunupur circle	...	...	...	...	1	660 0 0	1	7	...	964 5 9	1	99 0 0	1,723 5 9
		Total of district ...	...	...	1	1	2	2,800 11 2	14	34	5	6,776 15 11	4	336 14 8	9,914 9 9
26	Koraput.	Jeypore circle	...	...	...	...	1	735 8 0	1	6	4	1,711 0 2	1	101 8 4	2,548 0 6
27		Koraput do.	...	...	...	1	...	1,000 3 6	1	6	1	999 10 1	1	107 0 0	2,106 13 7
		Total of district ...	...	...	...	1	1	1,735 11 6	2	12	5	2,710 10 3	2	208 8 4	4,654 14 1
		Total of districts in the Northern range ...	...	...	5	4	18	18,420 0 4	72	128	73	40,712 12 4	27	2,626 15 1	61,759 11 9
1	Municipalities.	Anakāpalle	...	...	...	...	...	...	...	1	...	180 0 0	...	...	180 0 0
2		Berhampur	...	...	...	...	...	...	1	...	...	264 0 0	...	...	264 0 0
3		Bezwada	...	...	...	...	...	...	1	...	1	339 2 10	1	96 0 0	435 2 10
4		Bimlipatam	...	...	...	...	...	...	...	1	...	176 6 3	...	...	176 6 3
5		Chicacole	...	...	...	...	...	...	1	...	...	180 0 0	...	...	180 0 0
6		Cocanada	...	...	...	...	...	...	1	1	...	476 12 10	...	...	476 12 10
7		Ellore	...	...	...	...	...	...	1	1	...	456 11 1	...	...	456 11 1
8		Guntūr	...	...	...	...	...	...	1	1	...	462 8 3	2	168 0 0	630 8 3
9		Masulipatam	...	...	...	...	...	...	1	1	1	550 8 0	...	...	550 8 0
10		Narasaraopet	...	...	...	...	...	...	...	...	1	142 3 7	...	...	142 3 7
11		Nellore	...	...	...	...	...	...	...	...	1	191 0 7	1	69 12 3	260 12 10
12		Ongole	...	...	...	...	...	...	1	...	...	191 0 0	...	...	191 0 0
13		Parlākimedi	...	...	...	...	...	...	1	...	...	240 0 0	...	...	240 0 0
14		Peddapuram	...	...	...	...	...	...	...	1	...	144 0 0	...	...	144 0 0
15		Rajahmundry	...	...	...	...	...	...	1	1	...	423 14 6	...	...	423 14 6
16		Tenali	...	...	...	...	...	...	...	1	...	180 0 0	...	...	180 0 0
17		Vizagapatam	...	...	...	...	...	...	1	1	...	446 0 0	...	...	446 0 0
18		Vizianagram	...	...	...	...	...	...	1	1	...	372 11 6	...	...	372 11 6
		Total of Municipalities in the Northern range ...	...	...	...	...	...	...	12	11	4	5,416 15 5	4	333 12 3	5,750 11 8
		Grand Total of Northern range ...	...	...	5	4	18	18,420 0 4	84	139	77	46,129 11 9	31	2,960 11 4	67,510 7 5

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1917–18—cont.

Number.	Districts.	Circles—*cont.*	Expenditure—*cont.* Travelling allowance. (17)	Contingencies.* (18)	Total cost.* (19)	Paid from: Imperial funds. (20)	Provincial funds. (21)	Local funds. (22)	Municipal funds. (23)	Total. (24)	Number of all successful primary vaccination and re-vaccination. (25)	Average cost of each successful case. (26)
			RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		RS. A. P.
		NORTHERN RANGE—*cont.*										
1	Ganjām.	Berhampur circle	397 5 0	430 15 5	3,111 14 0	...	1,001 11 11	2,110 2 1	...	3,111 14 0	10,782	0 4 7
2		Chicacole do.	308 13 3	569 8 2	3,223 10 8	...	1,377 2 8	1,846 8 0	...	3,223 10 8	11,655	0 4 5
3		Aska do.	323 13 11	578 15 7	2,577 3 8	...	987 2 2	1,590 1 6	...	2,577 3 8	9,005	0 4 7
4		Parlākimedi do.	234 14 0	496 1 1	2,870 2 9	...	1,210 8 4	1,659 10 5	...	2,870 2 9	9,999	0 4 7
5		Purushottapur do.	281 6 0	553 0 9	3,182 15 7	...	973 2 11	2,209 12 8	...	3,182 15 7	10,597	0 4 10
6		Ganjām Hill tracts, North	1,091 13 0	377 15 9	3,206 13 7	...	3,206 13 7	...	...	3,206 13 7	8,130	0 6 4
7		Ganjām Hill tracts, South	1,121 10 0	322 8 3	3,365 10 7	...	3,365 10 7	...	...	3,365 10 7	5,996	0 9 0
		Total of district	3,759 11 2	3,329 1 0	21,538 6 10	...	12,122 4 2	9,416 2 8	...	21,538 6 10	66,164	0 5 3
8	Gōdāvari.	Cocanada circle	700 10 1	559 13 6	3,113 2 10	...	990 4 3	2,122 14 7	...	3,113 2 10	8,853	0 5 8
9		Rajahmundry do.	893 12 11	910 5 9	3,881 12 8	...	1,141 9 8	2,740 3 0	...	3,881 12 8	12,244	0 5 1
10		Polavaram do.	940 9 6	349 13 5	2,996 11 2	...	1,495 11 6	1,500 15 8	...	2,996 11 2	3,003	1 0 0
11		Peddāpur do.	773 7 2	958 4 4	3,921 13 10	...	884 5 2	3,037 8 8	...	3,921 13 10	9,355	0 6 8
12		Bhadrāchalam do.	1,126 3 1	270 14 11	3,292 6 1	...	3,292 6 1	...	...	3,292 6 1	1,997	1 10 5
		Total of district	4,434 10 9	3,049 3 11	17,205 14 7	...	7,804 4 8	9,401 9 11	...	17,205 14 7	35,452	0 7 9
13	Guntūr.	Guntūr circle	718 0 10	862 15 8	3,756 11 2	...	1,425 5 7	2,331 5 7	...	3,756 11 2	21,237	0 2 10
14		Narasaraopet circle	837 13 0	796 0 3	3,325 7 10	...	920 13 6	2,404 10 4	...	3,325 7 10	23,609	0 2 3
15		Bāpatla circle	647 3 6	858 14 10	3,713 13 11	...	1,156 9 0	2,557 4 11	...	3,713 13 11	21,395	0 2 9
		Total of district	2,203 1 4	2,517 14 9	10,796 0 11	...	3,502 12 1	7,293 4 10	...	10,796 0 11	66,241	0 2 7

Number.	Districts.	Circles—*cont.*	Travelling allowance. (17)	Contingencies.* (18)	Total cost.* (19)	Imperial funds. (20)	Provincial funds. (21)	Local funds. (22)	Municipal funds. (23)	Total. (24)	Number of all successful primary vaccination and re-vaccination. (25)	Average cost of each successful case. (26)
16	Kistna.	Ellore circle	1,205 11 2	758 7 3	5,059 14 11	...	1,211 6 9	3,848 8 2	...	5,059 14 11	22,841	0 3 7
17		Masulipatam circle	1,205 1 4	921 10 8	5,325 9 4	...	1,441 1 0	3,884 8 4	...	5,325 9 4	21,274	0 4 0
18		Narasapur do.	1,162 15 7	619 13 2	4,627 8 3	...	968 0 1	3,659 8 2	...	4,627 8 3	17,465	0 4 3
		Total of district	3,573 12 1	2,299 15 1	15,013 0 6	...	3,620 7 10	11,392 8 8	...	15,013 0 6	61,580	0 3 11
19	Nellore.	Kavali circle	665 3 6	543 12 0	3,303 14 7	...	1,105 4 1	2,198 10 6	...	3,303 14 7	11,514	0 4 7
20		Gudur do.	731 13 2	537 8 1	3,761 5 1	...	1,193 13 6	2,567 7 7	...	3,761 5 1	12,920	0 4 8
21		Kanigiri do.	693 6 6	541 5 1	4,451 15 10	...	1554 6 10	2,897 9 0	...	4,451 15 10	9,560	0 7 5
		Total of district	2,090 7 2	1,622 9 2	11,517 3 6	...	3,853 8 5	7,663 11 1	...	11,517 3 6	33,994	0 5 5
22	Vizagapatam.	Vizagapatam circle	855 5 9	1,762 7 9	5,123 13 2	...	1,069 15 5	4,053 13 9	...	5,123 13 2	27,759	0 2 11
...		Government vaccinators (Gudem Hills).	144 0 0	176 4 3	665 5 10	...	665 5 10	...	...	665 5 10	1,446	0 7 4
23		Vizianagram circle	705 13 11	1,180 11 9	4,598 12 3	...	1,327 12 0	3,271 0 3	...	4,598 12 3	23,565	0 3 1
24		Pārvatīpuram do.	802 4 5	1,034 14 4	4,347 2 11	...	1,322 2 5	3,025 0 6	...	4,347 2 11	23,331	0 3 0
...		Government vaccinators, Palkonda Agency.	117 10 0	31 6 2	267 0 2	...	267 0 2	...	...	267 0 2	512	0 8 4
25		Gunupur circle	1,397 0 9	851 1 0	3,971 7 6	...	1,432 13 8	2,538 9 10	...	3,971 7 6	10,531	0 6 0
		Total of district	4,022 2 10	5,036 13 3	18,973 9 10	...	6,085 1 6	12,888 8 4	...	18,973 9 10	87,144	0 3 6
26	Kora-put.	Jeypore circle	1,063 14 2	661 2 6	4,273 1 2		1,384 14 7	2,888 2 7		4,273 1 2	14,285	0 4 9
27		Koraput do.	876 4 3	492 1 6	3,475 3 4	...	1,724 5 6	1,750 13 10	...	3,475 3 4	9,750	0 5 8
		Total of district	1,940 2 5	1,153 4 0	7,748 4 6	...	3,109 4 1	4,639 0 5	...	7,742 4 6	24,035	0 5 2
		Total of districts in the Northern range.	22,023 15 9	19,008 13 2	1,02,792 8 8	..	40,097 10 9	62,694 13 11	...	1,02,792 8 8	374,610	0 4 5
1	Municipalities.	Anakapalle	...	86 1 4	266 1 4	...	...	...	266 1 4	266 1 4	834	0 5 1
2		Berhampur	...	53 8 7	317 8 7	...	...	...	317 8 7	317 8 7	1,206	0 4 3
3		Bezwada	...	41 5 4	476 8 2	...	...	...	476 8 2	476 8 2	1,397	0 5 5
4		Bimlipatam	...	63 2 8	239 8 11	...	...	...	239 8 11	239 8 11	530	0 7 3
5		Chicacole	...	88 8 5	268 8 5	...	...	...	268 8 5	268 8 5	825	0 5 2
6		Cocanada	...	114 5 7	591 2 5	...	...	...	591 2 5	591 2 5	1,750	0 5 5
7		Ellore	...	134 14 0	591 9 1	...	...	...	591 9 1	591 9 1	2,721	0 3 6
8		Guntūr		192 11 0	823 3 3	...	...	...	823 3 3	823 3 3	2,972	0 4 5
9		Masulipatam	...	228 5 3	778 13 3	...	...	...	778 13 3	778 13 3	2,312	0 5 5
10		Narasaraopet	...	90 13 8	233 1 3	...	...	...	233 1 3	233 1 3	946	0 3 11
11		Nellore	...	86 6 5	347 3 3	...	...	...	347 3 3	347 3 3	1,209	0 4 7
12		Ongole	...	51 5 10	242 5 10	...	...	...	242 5 10	242 5 10	1,492	0 2 7
13		Parlākimedi	...	22 11 9	262 11 9	...	...	...	262 11 9	262 11 9	613	0 6 10
14		Peddapuram	...	38 4 7	182 4 7	...	...	...	182 4 7	182 4 7	218	0 13 5
15		Rajahmundry	...	64 5 5	488 3 11	...	...	...	488 3 11	488 3 11	2,237	0 3 6
16		Tenali	...	81 13 7	261 13 7	...	...	...	261 13 7	261 13 7	1,158	0 3 7
17		Vizagapatam	...	161 0 3	607 0 3	...	...	...	607 0 3	607 0 3	1,529	0 6 4
18		Vizianagram	...	127 0 2	499 11 8	...	...	...	499 11 8	499 11 8	3,260	0 2 6
		Total of Municipalities in the Northern range.	...	1,726 11 10	7,477 7 6	...	...	...	7,477 7 6	7,477 7 6	27,209	0 4 5
		Grand Total of Northern range	22,023 15 9	20,735 9 0	1,10,270 0 2	...	40,097 10 9	62,694 13 11	7,477 7 6	1,10,270 0 2	401,819	0 4 5

* Includes cost of lymph supplied by King Institute of Preventive Medicine during 1917–18.

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A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1917–18—cont.

Number.	Districts.	Circles.	Expenditure. Inspector of Vaccination and Deputy Sanitary Commissioner.	Pay.	Deputy Inspectors. First grade.	Deputy Inspectors. Second grade.	Deputy Inspectors. Third grade.	Deputy Inspectors. Pay.	Vaccinators. First class.	Vaccinators. Second class.	Vaccinators. Probationers.	Vaccinators. Pay.	Peons, etc. Number.	Peons, etc. Pay.	Total pay of establishment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				RS. A. P.				RS. A. P.				RS. A. P.		RS. A. P.	RS. A. P.
		CENTRAL RANGE.													
1	Anantapur.	Anantapur circle	...	...	...	...	1	480 0 0	3	3	3	1,545 9 3	1	95 3 7	2,120 12 10
2		Penukonda do.	...	...	...	...	1	480 0 0	3	3	5	1,916 1 0	1	88 0 0	2,484 1 0
		Total of district	...	...	...	...	2	960 0 0	6	6	8	3,461 10 3	2	183 3 7	4,604 13 10
3	Bellary.	Bellary circle	...	...	..	1	...	770 8 0	5	5	1	1,409 8 10	1	79 4 8	2,259 5 6
4		Hospet do.	...	...	..	...	1	460 0 0	3	7	...	1,342 2 7	1	93 0 0	1,895 2 7
		Total of district	...	...	..	1	1	1,230 8 0	8	12	1	2,751 11 5	2	172 4 8	4,154 8 1
5	Chingleput.	Chingleput circle	...	..	1	...	...	754 14 0	...	4	...	1,972 5 0	1	86 5 2	2,813 8 2
6		Saidapet do.	...	...	..	...	1	918 1 4	...	4	...	1,348 12 7	1	93 7 6	2,360 5 5
7		Ponneri do.	...	...	1	...	...	909 8 8	...	4	...	1,164 9 10	1	95 0 0	2,169 2 6
		Total of district	...	...	2	...	1	2,582 8 0	...	12	...	4,485 11 5	3	274 12 8	7,343 0 1
8	Chittoor.	Chittoor circle	...	...	...	...	1	480 0 0	6	3	1	1,600 14 2	1	93 0 0	2,173 14 2
9		Karvetnagar circle	...	...		...	1	480 0 0	6	7	1	2,002 4 3	1	89 6 9	2,571 11 0
		Total of district	...	...	...	..	2	960 0 0	12	10	2	3,603 2 5	2	182 6 9	4,745 9 2
10	Cuddapah.	Cuddapah circle	...	...	...	...	1	1,055 12 10	3	5	...	1,164 2 5	1	86 6 0	2,306 5 3
11		Proddatur do.	...	...	...	...	1	480 0 0	2	5	...	1,130 10 5	1	101 0 0	1,711 10 5
12		Sidhout do	...	...	...	...	1	480 0 0	2	6	...	1,304 9 1	1	100 0 0	1,884 9 1
		Total of district	...	...	...	...	3	2,015 12 10	7	16	...	3,599 5 11	3	287 6 0	5,902 8 9

Number.	Districts.	Circles.	Inspector of Vaccination and Deputy Sanitary Commissioner.	Pay.	First grade.	Second grade.	Third grade.	Pay.	First class.	Second class.	Probationers.	Pay.	Number.	Pay.	Total pay of establishment.
13	Kurnool.	Cumbum circle	...	...	...	1	...	974 13 5	4	4	5	1,843 7 0	1	99 0 0	2,917 4 5
14		Kurnool do.	...	...	...	...	1	653 10 4	4	4	4	1,757 5 1	1	99 0 0	2,509 15 5
		Total of district	...	...	...	1	1	1,628 7 9	8	8	9	3,600 12 1	2	198 0 0	5,427 3 10
15	North Arcot.	Vellore circle	...	...	...	1	...	720 0 0	3	...	...	72 4 0	1	96 0 0	1,540 0 0
16		Rānipēttai do.	...	...	1	...	...	995 1 10	1	2	...	662 14 5	1	96 0 0	1,754 0 3
17		Polur do.	...	...	...	...	1	480 0 0	2	1	...	645 8 7	1	96 0 0	1,221 8 7
18		Tiruppattūr do.	...	...	...	1	...	720 0 0	3	6	1	1,349 1 11	1	96 0 0	2,165 1 11
		Total of district	...	...	1	2	1	2,915 1 10	9	9	1	3,381 8 11	4	384 0 0	6,680 10 9
19	Salem.	Salem circle	...	...	...	...	1	480 0 0	3	4	...	948 10 0	1	80 7 4	1,509 1 4
20		Sankari do.	...	...	1	...	...	750 0 0	1	9	...	812 15 10	1	83 1 4	1,646 1 2
21		Hosūr do.	...	...	1	...	...	560 12 9	2	7	...	1,222 7 9	1	84 0 0	1,867 4 6
		Total of district	...	...	2	...	1	1,790 12 9	6	20	..	2,984 1 7	3	247 8 8	5,022 7 0
22	South Arcot.	Cuddalore circle	...	...	...	1	...	720 0 0	...	4	...	1,002 15 6	1	96 0 0	1,818 15 6
23		Vriddhāchalam do.	...	...	...	...	1	480 0 0	3	3	1	939 9 9	1	96 0 0	1,515 9 9
24		Tirukkōyilūr do.	...	...	...	...	1	645 0 0	2	3	1	819 0 8	1	108 0 0	1,572 0 8
25		Tindivanam do.	...	...	..	1	...	786 2 7	2	2	1	759 10 10	1	96 0 0	1,641 13 5
26		Villupuram do.	...	...	1	...	...	583 15 0	...	4	...	1,524 1 11	1	96 0 0	2,204 0 11
		Total of district	...	...	1	2	2	3,215 1 7	7	16	3	5,045 6 8	5	492 0 0	8,752 8 3
		Total of circles in the Central Range	...	...	6	6	14	17,298 4 9	63	109	24	32,913 6 8	26	2,421 10 4	52,633 5 9
1	Municipalities.	Adōni	...	...	...	...	...	...	1	...	...	305 13 5	...	...	305 13 5
2		Anantapur	...	...	...	...	...	...	...	...	1	120 0 0	...	...	120 0 0
3		Bellary	...	...	...	...	...	...	2	1	...	576 10 7	...	...	576 10 7
4		Chidambaram	...	...	...	...	...	...	1	...	...	253 0 0	...	...	253 0 0
5		Chingleput	...	...	...	...	...	...	...	1	..	120 12 10	...	...	120 12 10
6		Chittoor	...	...	...	...	...	...	...	1	...	165 0 0	...	...	165 0 0
7		Conjeeveram	...	...	...	...	...	...	...	2	...	319 0 0	...	...	319 0 0
8		Cuddalore	...	...	...	...	...	...	1	1	...	420 0 0	...	...	420 0 0
9		Cuddapah	...	...	...	...	...	...	...	1	...	174 0 4	...	...	174 0 4
10		Gudiyāttam	...	...	...	...	...	...	...	1	...	135 0 9	...	...	135 0 9
11		Hospet	...	...	...	...	...	...	...	...	1	148 11 4	...	...	148 11 4
12		Kurnool	...	...	...	...	...	...	1	...	...	275 0 0	...	...	275 0 0
13		Madras	...	...	...	...	...	...	2	3	5	7,809 9 10*	10	1,196 2 0	9,005 11 10
14		Nandyal	...	...	...	...	...	...	1	...	...	191 0 0	...	...	191 0 0
15		Proddatur	...	...	...	...	...	...	...	1	...	180 0 0	...	...	180 0 0
16		Salem	...	...	...	...	...	...	1	1	...	659 0 3	...	...	659 0 3
17		Tiruppattūr	...	...	...	...	...	...	1	...	...	240 0 0	...	...	240 0 0
18		Tirupati	...	...	...	...	...	...	1	...	...	204 0 0	...	...	204 0 0
19		Tiruvannāmalai	...	...	...	...	...	...	1	...	...	215 0 0	...	...	215 0 0
20		Vāniyambādi	...	...	...	...	...	...	...	1	...	180 0 0	...	...	180 0 0
21		Vellore	...	...	...	...	...	...	2	...	...	420 12 0	...	...	420 12 0
22		Wālajāpet	...	...	...	...	...	...	...	1	...	159 8 0	...	...	159 8 0
		Total of Municipalities	...	...	...	...	...	...	15	15	7	13,271 15 4	10	1,196 2 0	14,468 1 4

* Includes the pay of Assistant Vaccinators and a Vaccinatrix.

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1917–18—cont.

Number.	Districts.	Circles—*cont.*	Expenditure—*cont.* Travelling allowance.	Contingencies. *	Total cost. *	Paid from Imperial funds.	Provincial funds.	Local funds.	Municipal funds.	Total.	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
			17	18	19	20	21	22	23	24	25	26
			RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		RS. A. P.
		CENTRAL RANGE—*cont.*										
1	Anantapur.	Anantapur circle	436 10 8	802 4 1	3,359 11 7	...	1,020 14 1	2,338 13 6	...	3,359 11 7	11,761	0 4 7
2		Penukonda do.	416 13 0	968 2 4	3,869 0 4	...	1,018 2 0	2,850 14 4	...	3,869 0 4	14,003	0 4 5
		Total of district ...	853 7 8	1,770 6 5	7,228 11 11	...	2,039 0 1	5,189 11 10	...	7,228 11 11	25,764	0 4 6
3	Bellary.	Bellary circle	1,142 12 9	974 9 4	4,376 11 7	...	1,495 3 2	2,881 8 5	...	4,376 11 7	12,225	0 5 9
4		Hospet do.	951 0 0	807 0 8	3,653 3 3	...	1,018 0 3	2,635 3 0	...	3,653 3 3	11,063	0 5 3
		Total of district ...	2,093 12 9	1,781 10 0	8,029 14 10	...	2,513 3 5	5,516 11 5	...	8,029 14 10	23,288	0 5 6
5	Chingleput.	Chingleput circle	464 1 5	743 15 9	4,021 9 4	...	1,456 8 2	2,565 1 2	...	4,021 9 4	13,401	0 4 10
6		Saidapet do.	1,079 10 3	535 14 9	3,975 14 5	...	1,604 1 7	2,371 12 10	...	3,975 14 5	10,030	0 6 4
7		Ponnēri do.	869 8 1	713 0 3	3,751 10 10	...	1,588 10 11	2,162 15 11	...	3,751 10 10	13,538	0 4 5
		Total of district ...	2,413 3 9	1,992 14 9	11,749 2 7	...	4,649 4 8	7,099 13 11	...	11,749 2 7	36,969	0 5 1
8	Chittoor.	Chittoor circle	808 1 11	662 10 10	3,644 10 11	...	964 7 2	2,680 3 9	...	3,644 10 11	12,662	0 4 7
9		Karvetnagar circle	1,002 15 2	815 7 8	4,390 1 10	...	1,029 9 5	3,360 8 5	...	4,390 1 10	17,944	0 3 11
		Total of district ...	1,811 1 1	1,478 2 6	8,034 12 9	...	1,994 0 7	6,040 12 2	...	8,034 12 9	30,606	0 4 2
10	Cuddapah.	Cuddapah circle	589 8 11	422 0 3	3,317 14 5	..	1,505 5 4	1,812 9 1	...	3,317 14 5	6,692	0 7 11
11		Proddatur do.	516 12 8	361 6 8	2,589 13 9	...	909 13 11	1,679 15 10	...	2,589 13 9	6,377	0 6 6
12		Sidhout do.	588 4 2	479 2 10	2,952 0 1	...	956 14 0	1,995 2 1	...	2,952 0 1	9,108	0 5 2
		Total of district ...	1,694 9 9	1,262 9 9	8,859 12 3	...	3,372 1 3	5,487 11 0	...	8,859 12 3	22,177	0 6 5
13	Kurnool.	Cumbum circle	564 1 3	695 5 5	4,176 11 1	..	1,905 13 0	2,270 14 1	...	4,176 11 1	13,614	0 4 11
14		Kurnool do.	278 10 6	646 5 6	3,434 15 5	...	1,204 6 3	2,230 9 2	...	3,434 15 5	15,008	0 3 8
		Total of district ...	842 11 9	1,341 10 11	7,611 10 6	...	3,110 3 3	4,501 7 3	...	7,611 10 6	28,622	0 4 3
15	North Arcot.	Vellore circle	1,134 10 0	539 1 3	3,213 11 3	...	1,808 2 5	1,405 8 10	...	3,213 11 3	11,384	0 4 6
16		Rānipēttai do.	931 2 6	482 11 9	3,167 14 6	...	1,625 12 4	1,542 2 2	...	3,167 14 6	9,823	0 5 2
17		Polur do.	828 9 4	523 15 0	2,574 0 11	...	1,222 14 4	1,351 2 7	...	2,574 0 11	11,601	0 3 7
18		Tiruppattūr do.	1,014 5 3	654 14 6	3,834 5 8	...	1,460 0 8	2,374 5 0	...	3,834 5 8	17,396	0 3 6
		Total of district ...	3,908 11 1	2,200 10 6	12,790 0 4	...	6,116 13 9	6,673 2 7	...	12,790 0 4	50,204	0 4 1
19	Salem.	Salem circle	352 14 4	645 13 5	2,507 13 1	...	753 12 10	1,754 0 3	...	2,507 13 1	11,494	0 3 6
20		Sankari do.	490 2 11	671 9 8	2,807 13 9	..	1,204 3 10	1,603 9 11	...	2,807 13 9	14,686	0 3 1
21		Hosūr do.	231 4 2	666 14 6	2,765 7 2	...	937 7 0	1,828 0 2	...	2,765 7 2	15,552	0 2 10
		Total of district ...	1,074 5 5	1,984 5 7	8,081 2 0	...	2,895 7 8	5,185 10 4	...	8,081 2 0	41,732	0 3 1
22	South Arcot.	Cuddalore circle	956 10 5	661 1 8	3,436 11 7	...	1,416 3 7	2,020 8 0	...	3,436 11 7	14,156	0 3 11
23		Vriddhāchalam do.	645 9 4	648 3 2	2,809 6 3	...	1,034 1 0	1,775 5 3	...	2,809 6 3	12,573	0 3 7
24		Tirukkōyilūr do.	554 14 10	524 5 4	2,651 4 10	...	1,093 3 9	1,558 1 1	...	2,651 4 10	10,698	0 4 0
25		Tindivanam do.	514 8 9	447 4 9	2,603 10 11	...	1,211 9 7	1,392 1 4	...	2,603 10 11	10,129	0 4 1
26		Villupuram do.	62 0 0	483 7 0	2,749 7 11	...	759 15 0	1,989 8 11	...	2,749 7 11	9,981	0 4 5
		Total of district ...	2,733 11 4	2,764 5 11	14,250 9 6	...	5,515 0 11	8,735 8 7	...	14,250 9 6	57,537	0 4 0
		Total of circles in the Central Range ...	17,425 10 7	16,576 12 4	86,635 12 8	...	32,205 3 7	54,430 9 1	...	86,635 12 8	316,899	0 4 4
1	Municipalities.	Adōni	...	107 15 11	413 13 4	...	...	...	413 13 4	413 13 4	772	0 8 7
2		Anantapur	...	17 2 5	137 2 5	...	...	...	137 2 5	137 2 5	442	0 5 0
3		Bellary	...	133 4 6	709 15 1	...	...	...	709 15 1	709 15 1	2,843	0 4 0
4		Chidambaram	...	98 12 8	351 12 8	...	...	...	351 12 8	351 12 8	860	0 6 7
5		Chingleput	...	48 11 1	169 7 11	...	...	...	169 7 11	169 7 11	656	0 4 2
6		Chittoor	...	59 11 3	224 11 3	...	...	...	224 11 3	224 11 3	627	0 5 9
7		Conjeeveram	1 3 0	87 2 4	407 5 4	...	...	...	407 5 4	407 5 4	1,903	0 3 5
8		Cuddalore	...	137 13 9	557 13 9	...	...	...	557 13 9	557 13 9	2,611	0 3 5
9		Cuddapah	...	58 12 11	232 13 3	...	...	...	232 13 3	232 13 3	642	0 5 11
10		Gudiyāttam	...	34 10 3	169 11 0	...	...	...	169 11 0	169 11 0	820	0 3 4
11		Hospet	...	44 4 0	192 15 4	...	...	...	192 15 4	192 15 4	823	0 3 9
12		Kurnool	...	22 10 1	297 10 1	...	...	...	297 10 1	297 10 1	759	0 6 3
13		Madras	28 8 0	2,742 0 6	11,776 4 4	...	...	...	11,776 4 4	11,776 4 4	27,580	0 6 10
14		Nandyal	...	37 14 6	228 14 6	...	...	...	228 14 6	228 14 6	712	0 5 2
15		Proddatur	...	14 13 5	194 13 5	...	...	...	194 13 5	194 13 5	503	0 6 2
16		Salem	...	148 4 9	807 5 0	...	...	...	807 5 0	807 5 0	2,478	0 5 3
17		Tiruppattūr...	...	78 10 1	318 10 1	...	...	...	318 10 1	318 10 1	881	0 5 9
18		Tirupati	...	33 9 7	237 9 7	...	...	...	237 9 7	237 9 7	419	0 9 1
19		Tiruvannāmalai	...	42 6 10	257 6 10	...	...	...	257 6 10	257 6 10	916	0 4 6
20		Vāniyambādi	...	26 0 10	206 0 10	...	...	...	206 0 10	206 0 10	835	0 3 11
21		Vellore	...	127 8 4	548 4 4	...	...	...	548 4 4	548 4 4	2,147	0 4 1
22		Wālajāpet	...	24 6 6	183 14 6	...	...	...	183 14 6	183 14 6	404	0 7 3
		Total of Municipalities ...	29 11 0	4,126 10 6	18,624 6 10	...	...	...	18,624 6 10	18,624 6 10	50,633	0 5 11

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1917–18—cont.

Number.	Districts.	Circles.	Expenditure. Inspector of Vaccination and Deputy Sanitary Commissioner.	Pay.	Deputy Inspectors. First grade.	Second grade.	Third grade.	Pay.	Vaccinators. First class.	Second class.	Probationers.	Pay.	Peons, etc. Number.	Pay.	Total pay of establishment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		CENTRAL RANGE—*cont.*		RS. A. P.				RS. A. P.				RS. A. P.		RS. A. P.	RS. A. P.
	...	Bangalore Cantonment ...	...	...	..	...	...	...	1	1	...	336 0 0	..	...	336 0 0
	...	Secunderabad do. ...	...	...	1	...	...	1,080 0 0	1	3	...	950 6 2	4	340 2 5	2,370 8 7
		Total of Cantonments ...	...	...	1	...	...	1,080 0 0	2	4	...	1,286 6 2	4	340 2 5	2,706 8 7
		Grand Total of Central Range ...	...	...	7	6	14	18,378 4 9	80	128	31	47,471 12 2	40	3,957 14 9	69,807 15 8
		SOUTHERN RANGE.													
1	Coimbatore.	North Coimbatore circle ...	...	...	...	1	...	712 0 0	3	5	2	1,559 5 11	1	94 7 3	2,365 13 2
2		East do. ...	...	...	1	...	...	840 0 0	1	7	1	1,475 6 0	1	96 0 0	2,411 6 0
3		South do. ...	...	...	...	...	1	480 0 0	2	3	2	1,006 3 7	1	95 8 0	1,581 11 7
4		Central do. ...	...	...	1	...	...	840 0 0	2	6	1	1,298 7 1	1	96 0 0	2,234 7 7
		Total of district ...	...	...	2	1	1	2,872 0 0	8	21	6	5,339 7 1	4	381 15 3	8,593 6 4
5	Madura.	Dindigul circle ...	...	...	...	1	...	655 2 7	...	4	...	1,161 13 0	1	100 0 0	1,916 15 7
6		Madura do. ...	...	...	...	1	...	720 0 0	...	4	...	1,569 2 7	1	101 0 0	2,390 2 7
7		Usilampatti do. ...	...	...	...	...	1	480 0 0	...	4	...	1,228 10 2	1	101 0 0	1,809 10 2
		Total of district ...	...	...	...	2	1	1,855 2 7	...	12	...	3,959 9 9	3	302 0 0	6,116 12 4
8	Malabar.	Tellicherry circle ...	...	...	...	...	1	571 5 4	2	8	...	1,947 1 11	1	102 0 0	2,620 7 3
9		Calicut do. ...	...	...	...	...	1	470 0 0	3	6	...	1,877 4 5	1	102 0 0	2,449 4 5
10		Palghat do. ...	...	...	...	1	...	574 3 1	3	9	...	2,093 5 0	1	100 8 0	2,768 0 1
11		Malapuram do. ...	...	...	...	...	1	480 0 0	3	8	...	1,854 10 11	1	102 0 0	2,436 10 11
		Total of district ...	...	...		1	3	2,095 8 5	11	31	...	7,772 6 3	4	406 8 0	10,274 6 8
12	The Nilgiris.	Nilgiris circle ...	...	...	...	...	1	721 10 7	3	...	...	1,049 0 5	1	117 4 8	1,887 15 8
		Total of district ...	...	...	...	...	1	721 10 7	3	...	...	1,049 0 5	1	117 4 8	1,887 15 8
13	Rāmnād.	Srīvilliputtūr circle ...	...	...	...	1	...	952 0 2	3	5	1	1,611 7 4	1	100 0 0	2,663 7 6
14		Rāmnād do. ...	...	...	...	...	1	740 12 9	3	6	1	2,029 15 9	1	95 15 9	2,866 12 3
15		Tiruppattūr circle ...	...	...	1	...	...	680 0 0	3	8	1	1,494 6 7	1	91 8 0	2,265 14 7
		Total of district ...	...	...	1	1	1	2,372 12 11	9	19	3	5,135 13 8	3	287 7 9	7,796 2 4
16	South Kanara.	Northern circle ...	...	...	...	1	...	720 0 0	1	3	4	1,665 2 7	1	102 0 0	2,487 2 7
17		Central do. ...	...	...	...	...	1	1,008 12 8	2	1	5	1,831 11 10	1	102 0 0	2,942 8 6
18		Southern do. ...	...	...	...	...	1	480 0 0	1	5	4	2,093 7 6	1	102 0 0	2,675 7 6
		Total of district ...	...	...	...	1	2	2,208 12 8	4	9	13	5,590 5 11	3	306 0 0	8,105 2 7
19	Tanjore.	Tanjore circle ...	...	...	...	1	...	720 0 0	2	5	1	1,285 5 3	1	96 14 0	2,102 3 3
20		Negapatam do. ...	...	...	1	...	...	768 14 3	3	6	1	1,457 7 2	1	100 1 3	2,326 6 8
21		Pattukkōttai do. ...	...	...	...	1	...	780 0 0	2	10	1	1,900 10 5	1	102 0 0	2,782 10 5
22		Kumbakōnam do. ...	...	...	...	...	1	480 0 0	2	11	1	1,710 11 6	1	102 0 0	2,292 11 6
		Total of district ...	...	...	1	2	1	2,748 14 3	9	32	4	6,354 2 4	4	400 15 3	9,503 15 10
23	Tinnevelly.	Sērmadēvi circle ...	...	...	...	1	..	737 8 11	4	3	1	1,352 12 2	1	102 0 0	2,192 5 1
24		Srīvaikuntam do. ...	...	...	...	1	.	820 0 0	3	5	1	1,169 1 7	1	102 0 0	2,091 1 7
25		Kovilpatti do. ...	..	...	1	...	...	622 5 4	1	4	3	816 2 2	1	102 0 0	1,540 7 6
		Total of district ...	...	...	1	2	...	2,179 14 3	8	12	5	3,337 15 11	3	306 0 0	5,823 14 2
26	Trichinopoly.	Trichinopoly circle ...	...	...	1	...	...	886 10 8	4	8	2	1,932 8 7	1	96 0 0	2,915 3 3
27		Ariyalūr do. ...	...	...	1	...	...	824 3 1	4	4	2	1,401 3 1	1	113 10 6	2,339 0 8
28		Nāmakkal do. ...	...	...	...	...	1	480 0 0	3	6	1	2,184 11 3	1	96 0 0	2,760 11 3
		Total of district ...	...	...	2	...	1	2,190 13 9	11	18	5	5,518 6 11	3	305 10 6	8,014 15 2
		Total of circles in the Southern Range ...	...	...	7	10	11	19,245 9 5	63	154	36	44,057 4 3	28	2,813 13 5	66,116 11 1
1	Municipalities.	Bodināyakkānūr ...	...	...	...	...	...	...	2	..	...	171 4 8	...	...	171 4 8
2		Calicut ...	...	...	...	...	...	...	1	2	...	495 11 4	...	...	495 11 4
3		Cannanore ...	...	...	...	...	...	...	1	...	...	240 0 0	...	...	240 0 0
4		Cochin ...	...	...	...	...	...	...	1	..	..	180 10 0	...	...	180 10 0
5		Coimbatore ...	...	...	...	...	...	...	1	2	...	672 1 9	...	...	672 1 9
6		Coonoor ...	...	...	...	...	...	...	1	...	...	229 11 11	...	...	229 11 11
7		Dindigul ...	...	...	...	...	...	...	1	...	...	237 15 0	...	...	237 15 0
8		Dharapuram ...	...	...	...	...	...	...	1	...	...	176 0 0	...	...	176 0 0
9		Erode ...	...	...	...	...	...	...	1	...	...	193 14 11	...	...	193 14 11
10		Karūr ...	...	...	...	...	...	..	1	...	...	311 0 0	...	...	311 0 0
11		Kodaikānal ...	...	...	...	...	...	...	1*	...	...	120 0 0	1	90 0 0	210 0 0
*12		Kumbakōnam ...	...	...	...	...	...	...	1	2	...	473 5 8	...	...	473 5 8
13		Madura ...	...	...	...	...	...	...	...	...	17†	2,149 7 4	...	...	2,149 7 4

* Medical Officer with vaccination allowances.

† The posts of Vaccinators in this municipality are not graded.

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1917–18—cont.

Number.	Districts.	Circles—*cont.*	Expenditure—*cont.* Travelling allowance.	Contingencies.	Total cost.	Paid from Imperial funds.	Provincial funds.	Local funds.	Municipal funds.	Total.	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
			17	18	19	20	21	22	23	24	25	26
			RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		RS. A. P.
		CENTRAL RANGE—*cont.*										
1	...	Bangalore Cantonment	240 0 0	4 3 4	580 3 4	580 3 4	...		...	580 3 4	590	0 15 9
2	..	Secunderabad do.	180 0 0	676 12 4	3,227 4 11	...	...	3,227 4 11	...	3,227 4 11	5,670	0 9 1
		Total of Cantonments ...	420 0 0	680 15 8	3,807 8 3	580 3 4	...	* 3,227 4 11	...	3,807 8 3	6,260	0 9 9
		Grand Total of Central Range ...	17,875 5 7	21,384 6 6	1,09,067 11 9	580 3 4	32,205 3 7	57,657 14 0	18,624 6 10	1,09,067 11 9	373,792	0 4 8
		SOUTHERN RANGE—*cont.*										
1	Coimbatore.	North Coimbatore circle	422 3 4	963 8 9	3,751 9 3	...	1,449 0 6	2,302 8 9	...	3,751 9 3	12,465	0 4 9
2		East do. do.	499 7 6	889 3 8	3,800 1 2	...	1,564 6 7	2,235 10 7	...	3,800 1 2	13,126	0 4 7
3		South do. do.	528 5 2	820 8 2	2,930 8 11	...	1,025 4 3	1,905 4 8	...	2,930 8 11	14,546	0 3 2
4		Central do. do.	741 15 8	1,021 0 11	3,997 8 2	...	1,587 2 3	2,410 5 11	...	3,997 8 2	14,440	0 4 5
		Total of district ...	2,191 15 8	3,694 5 6	14,479 11 6	...	5,625 13 7	8,853 13 11	...	14,479 11 6	54,577	0 4 3
5	Madura.	Dindigul circle	770 8 4	765 11 7	3,453 3 6		1,205 11 10	2,247 7 8	...	3,453 3 6	12,727	0 4 4
6		Madura do.	796 13 4	722 2 7	3,909 2 6	...	1,234 2 0	2,675 0 6	...	3,909 2 6	13,264	0 4 8
7		Usilampatti do.	1,006 14 3	680 8 1	3,497 0 6	...	1,250 3 10	2,246 12 8	...	3,497 0 6	11,172	0 5 0
		Total of district ...	2,574 3 11	2,168 6 3	10,859 6 6	...	3,690 1 8	7,169 4 10	...	10,859 6 6	37,163	0 4 8
8	Malabar.	Tellicherry circle	1,036 2 6	1,372 4 6	5,028 14 3	...	1,467 5 10	3,561 8 5		5,028 14 3	22,236	0 3 7
9		Calicut do.	1,273 10 1	1,323 4 8	5,046 3 2	...	1,352 9 9	3,693 9 5	...	5,046 3 2	18,380	0 4 4
10		Palghat do.	1,397 6 3	1,837 14 5	6,003 4 9	...	1,533 4 1	4,470 0 8	...	6,003 4 9	24,457	0 2 7
11		Malappuram do.	1,267 14 2	1,524 6 1	5,228 15 2	...	1,341 7 1	3,887 8 1	...	5,228 15 2	25,027	0 3 4
		Total of district ...	4,975 1 0	6,057 13 8	21,307 5 4	...	5,694 10 9	15,612 10 7	...	21,307 5 4	90,100	0 3 9

Number.	Districts.	Circles—*cont.*	Travelling allowance.	Contingencies.	Total cost.	Imperial funds.	Provincial funds.	Local funds.	Municipal funds.	Total.	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
12	The Nilgiris.	Nilgiris Circle	636 4 6	666 11 11	3,191 0 1	...	1,993 11 3	1,197 4 10	...	3,191 0 1	4,673	0 10 11
		Total of district ...	636 4 6	666 11 11	3,191 0 1	...	1,993 11 3	1,197 4 10	..	3,191 0 1	4,673	0 10 11
13	Rāmnād.	Srīvilliputtūr circle	998 3 10	686 6 9	4,348 2 1	...	1,892 3 3	2,455 14 10	...	4,348 2 1	15,374	0 4 6
14		Rāmnād circle	361 10 1	586 0 11	3,814 7 3	...	1,332 5 9	2,482 1 6	...	3,814 7 3	16,254	0 3 9
15		Tiruppattūr circle	856 0 2	841 2 10	3,963 1 7	...	1,243 12 6	2,719 5 1	...	3,963 1 7	16,495	0 3 9
		Total of district ...	2,215 14 1	2,113 10 6	12,125 10 11	...	4,468 5 6	7,657 5 5	...	12,125 10 11	48,123	0 4 0
16	South Kanara.	Northern circle	872 3 1	389 4 8	3,748 10 4	...	1,275 7 0	2,473 3 4	...	3,748 10 4	12,475	0 4 9
17		Central do.	875 8 3	450 12 9	4,268 13 6	...	1,564 13 5	2,704 0 1	...	4,268 13 6	11,227	0 6 0
18		Southern do.	1,026 1 9	490 11 3	4,192 4 6	...	1,166 6 10	3,025 13 8	..	4,192 4 6	12,807	0 5 2
		Total of district ...	2,773 13 1	1,330 12 8	12,209 12 4	...	4,006 11 3	8,203 1 1	...	12,209 12 4	37,509	0 5 4
19	Tanjore.	Tanjore circle	338 15 10	588 6 3	3,029 9 4	...	1,174 11 4	1,854 14 0	...	3,029 9 4	13,982	0 3 5
20		Negapatam do.	335 15 1	673 6 2	3,335 11 11	...	1,189 7 0	2,146 4 11	...	3,335 11 11	15,861	0 3 4
21		Pattukkōttai do.	395 3 6	868 10 5	4,046 8 4	...	1,442 3 6	2,604 4 10	...	4,046 8 4	17,284	0 3 8
22		Kumbakōnam do.	371 9 3	1,084 3 4	3,748 8 1	...	961 6 9	2,787 1 4	..	3,748 8 1	16,618	0 3 7
		Total of district ...	1,441 11 8	3,214 10 2	14,160 5 8	...	4,767 12 7	9,392 9 1	...	14,160 5 8	63,745	0 3 6
23	Tinnevelly.	Sērmadēvi circle	292 13 3	720 6 8	3,205 9 0	...	1,234 1 2	1,971 7 10	...	3,205 9 0	17,541	0 3 6
24		Srīvaikuntam do.	624 13 10	902 8 2	3,618 7 7	...	1,354 4 6	2,264 3 1	...	3,618 7 7	19,745	0 2 6
25		Koilpatti do.	579 0 11	663 6 3	2,782 14 8	...	1,124 7 4	1,658 7 4	...	2,782 14 8	17,479	0 2 6
		Total of district	1,496 12 0	2,286 5 1	9,606 15 3	...	3,712 13 0	5,894 2 3	...	9,606 15 3	44,765	0 3 5
26	Trichinopoly.	Trichinopoly circle	884 0 5	827 15 0	4,627 2 8	...	1,526 15 9	3,100 2 11	...	4,627 2 8	18,560	0 4 0
27		Ariyalūr do.	563 1 7	854 6 6	3,756 8 9	...	1,347 15 10	2,408 8 11	...	3,756 8 9	13,390	0 4 6
28		Nāmakkal do.	219 9 1	742 5 11	3,722 10 3	...	990 11 0	2,731 15 3	...	3,722 10 3	15,887	0 3 9
		Total of district ...	1,666 11 1	2,424 11 5	12,106 5 8	...	3,865 10 7	8,240 11 1	...	12,106 5 8	47,837	0 4 0
		Total of circles in the Southern Range	19,972 7 0	23,957 7 2	1,10,046 9 3	...	37,825 10 2	72,220 15 1	...	1,10,046 9 3	437,492	0 4 0
1	Municipalities.	Bodinayakanur	...	35 15 10	207 4 6	...	...	...	207 4 6	207 4 6	1,172	0 2 9
2		Calicut	...	329 3 11	824 15 3	...	...	...	824 15 3	824 15 3	6,824	0 1 11
3		Cannanore	...	66 5 0	306 5 0	...	...	...	306 5 0	306 5 0	2,353	0 2 1
4		Cochin	...	83 12 6	264 6 6	...	...	...	246 6 6	264 6 6	1,497	0 2 9
5		Coimbatore	...	174 0 8	846 2 5	...	...	...	846 2 5	846 2 5	1,875	0 7 2
6		Coonoor	...	43 8 6	273 4 5	...	...	...	273 4 5	273 4 5	1,061	0 4 1
7		Dindigul	...	86 0 9	323 15 9	...	...	...	323 15 9	323 15 9	1,241	0 4 2
8		Dharapuram	...	29 15 8	205 15 8	...	...	...	205 15 8	205 15 8	440	0 7 6
9		Erode	...	48 0 8	241 15 7	...	...	...	241 15 7	241 15 7	572	0 6 9
10		Karūr	...	14 3 4	325 3 4	...	...	...	325 3 4	325 3 4	694	0 7 5
11		Kodaikānal	...	7 2 6	217 2 6	...	...	...	217 2 6	217 2 6	277	0 12 6
12		Kumbakōnam	...	93 13 9	567 3 5	...	...	...	567 3 5	567 3 5	2,040	0 4 5
13		Madura	...	1,560 0 4	3,709 7 8	...	...	...	3,709 7 8	3,709 7 8	23,651	0 2 6

* Paid from Local, Abkāri, etc., funds.

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1917–18—cont.

Number	Districts.	Circles.	Expenditure. Inspector of Vaccination and Deputy Sanitary Commissioner.	Pay.	Deputy Inspectors. First grade.	Second grade.	Third grade.	Pay.	Vaccinators. First class.	Second class.	Probationers.	Pay.	Peons. Number.	Pay.	Total pay of establishment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		SOUTHERN RANGE—*cont.*		RS. A. P.				RS. A. P.				RS. A. P.		RS. A. P.	RS. A. P.
14	Municipalities.	Mannārgudi	...	...	...	...	...	...	1	...	...	207 8 0	...	...	207 8 0
15		Mangalore	...	...	...	...	...	...	1	1	...	451 7 3	1	96 0 0	547 7 3
16		Māyavaram	...	...	...	...	...	...	1	...	...	216 0 0	...	...	216 0 0
17		Negapatam	...	...	...	...	...	...	1	2	1	555 0 0	...	...	555 0 0
18		Ootacamund	...	...	...	...	...	...	1	1	...	278 0 0	...	...	278 0 0
19		Palamcottah	...	...	...	...	...	...	1	1	...	402 10 0	1	84 0 0	486 10 0
20		Palghat	...	...	...	...	...	...	1	1	...	425 5 10	...	...	425 5 10
21		Periyakulam	...	...	...	...	...	...	1	...	...	186 0 0	...	...	186 0 0
22		Palni	...	...	...	...	...	...	1	...	...	236 11 1	...	...	236 11 1
23		Srīrangam	...	...	...	...	...	...	1	...	...	238 0 0	...	...	238 0 0
24		Srīvilliputtūr	...	...	...	...	...	...	1	...	...	120 0 0	...	...	120 0 0
25		Tanjore	...	...	...	...	...	...	1	3	...	476 9 3	...	...	476 9 3
26		Tellicherry	...	...	...	...	...	...	...	1	1	305 0 0	1	72 0 0	377 0 0
27		Tinnevelly	...	...	...	...	...	...	1	1	...	425 3 7	1	96 0 0	521 3 7
28		Trichinopoly	...	...	...	...	...	...	1	1	1	1,132 7 5	...	...	1,132 7 5
29		Tiruvālūr	...	...	...	...	...	...	1	...	...	192 0 0	...	...	192 0 0
30		Tuticorin	...	...	...	...	...	...	1	...	...	259 2 7	...	...	259 2 7
31		Virudupatti	...	...	...	...	...	...	...	1	1	243 0 9	...	...	243 0 9
		Total of municipalities ...	...	...	...	...	...	...	...	...	...	12,001 4 4	5	438 0 0	12,439 4 4
		Grand Total of Southern Range ...	...	...	7	10	11	19,245 9 5	29	19	21	56,058 8 7	33	3,251 13 5	78,555 15 5
		Madras Presidency	2	*9,600 0 0	...	...	...	...	92	173	57	..	...	...	9,600 0 0
		Grand Total ...	2	*9,600 0 0	19	20	43	56,043 14 6	256	440	165	1,49,660 0 6	104	10,170 7 6	2,25,474 6 6

* No pay or travelling allowance was drawn by the newly appointed Deputy Sanitary Commissioner, Southern Range, during 1917–18.

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1917–18—cont.

Number.	Districts.	Circles—*cont.*	Expenditure—*cont.* Travelling allowance.	Contingencies.*	Total cost.*	Paid from Imperial funds.	Provincial funds.	Local funds.	Municipal funds.	Total.	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
			17	18	19	20	21	22	23	24	25	26
		SOUTHERN RANGE—*cont.*	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		RS. A. P.
14	Municipalities—*cont.*	Mannārgudi	...	41 11 3	249 3 3	..	...	...	249 3 3	249 3 3	7·7	0 5 0
15		Mangalore	...	61 15 11	609 7 2	...	...	...	609 7 2	609 7 2	2,939	0 3 3
16		Māyavaram	...	44 4 3	260 4 3		...	...	260 4 3	260 4 3	1,098	0 3 9
17		Negapatam	.	187 2 2	742 2 2	...	...	.	742 2 2	742 2 2	4,093	0 2 10
18		Ootacamund	..	61 3 10	339 3 10	...	...	...	339 3 10	339 3 10	1 088	0 5 0
19		Palamcottah	...	64 0 9	550 10 9	...	...	...	550 10 9	550 10 9	1,864	0 3 6
20		Palghat	...	113 14 7	539 4 5	...	...	...	539 4 5	539 4 5	1,791	0 4 9
21		Periyakulam	..	34 15 1	220 15 1	...	...	...	220 15 1	220 15 1	884	0 4 0
22		Palni	...	26 15 1	263 10 2	...		...	263 10 2	263 10 2	1,136	0 3 8
23		Srīrangam	...	60 14 4	298 14 4	...		...	298 14 4	298 14 4	1,224	0 3 10
24		Srīvilliputtūr	...	70 8 3	190 8 3	...		...	190 8 3	190 8 3	1,126	0 2 8
25		Tanjore	...	186 6 4	662 15 7	...	...	...	662 15 7	662 15 7	3,207	0 3 2
26		Tellicherry	...	64 5 8	441 5 8	...	...	...	441 5 8	441 5 8	988	0 7 2
27		Tinnevelly	40 0 0	153 8 11	714 12 6	...	...	...	714 12 6	714 12 6	2,037	0 5 7
28		Trichinopoly	...	131 9 1	1,264 0 6	...	...		1,264 0 6	1,264 0 6	4,809	0 4 2
29		Tiruvālūr	...	28 5 11	220 5 11	...	...	...	220 5 11	220 5 11	594	0 5 11
30		Tuticorin	...	49 7 10	308 10 5	...	...		308 10 5	308 10 5	2,181	0 2 3
31		Virudupatti	...	73 2 1	316 2 10	...	...	...	316 2 10	316 2 10	1,336	0 3 9
		Total of municipalities ...	40 0 0	4,026 10 9	16,505 15 1	...	...	...	16,505 15 1	16,505 15 1	76,889	0 3 5
		Grand Total of Southern Range ...	20,012 7 0	27,984 1 11	1,26,552 8 4	...	37,825 10 2	72,220 15 1	16,505 15 1	1,26,552 8 4	514,381	0 3 11
		Madras Presidency ...	* 3,085 5 0	...	13,285 5 0	...	13,285 5 0	...	..	13,285 5 0	...	...
		Grand Total ...	*63,597 1 4	†70,104 1 5	†‡3,59,175 9 3	580 3 4	1,23,413 13 6	1,92,573 11 0	42,607 13 5	‡3,59,175 9 3	1,289,992	0 4 5

* No pay or travelling allowance was drawn by the newly appointed Deputy Sanitary Commissioner, Southern Range, during 1917–18.
† Includes cost of lymph supplied from the King Institute of Preventive Medicine, Guindy, during 1917–18.
‡ Includes the pay and allowance drawn by the Deputy Sanitary Commissioner, Madras, during 1917–18.
N.B.—The average cost of each successful case was calculated on the total number of successful vaccinations performed by the special staff only, viz., Local Fund, Government, Municipal and Cantonment staffs (vide G.O. Mis. No. 1158 L., dated 4th September 1911).

B—DISPENSARY VACCINATION.

Statement No. III showing Dispensary Vaccination in Madras Presidency for the official year 1917–18.

Districts.	Number of dispensaries in each district to which a vaccinator is attached.	Average number of vaccinators attached to dispensaries during the year.	Total number of persons vaccinated.	Average number of persons vaccinated by each vaccinator	Primary vaccination. Total number of operations.	Primary vaccination. Successful. Under one year.	Primary vaccination. Successful. Over one and under six years.	Primary vaccination. Successful. Total of all ages.	Primary vaccination. Unknown.	Re-vaccination. Total number of operations.	Re-vaccination. Successful.	Re-vaccination. Unknown.	Percentage of successful cases in which the results were known. Primary vaccination.	Percentage of successful cases in which the results were known. Re-vaccination.	Percentage of unknown cases to total operations. Primary vaccination.	Percentage of unknown cases to total operations. Re-vaccination.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
NORTHERN RANGE.																
Ganjām ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gōdāvari (L.F. hospital, Amalapur).	...	...	5	...	...	...	...	...	...	5	4	1	...	100·0	...	20·0
Guntūr ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kistna ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nellore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Vizagapatam ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Koraput ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	...	...	5	...	...	...	...	...	...	5	4	1	...	100·0	...	20·0
CENTRAL RANGE.																
Anantapur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bellary ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chingleput ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittoor ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cuddapah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kurnool ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madras ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Arcot ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Salem ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Arcot ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SOUTHERN RANGE.																
Coimbatore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madura (Municipal hospital, Kodaikānal).	...	...	292	...	191	144	25	189	...	101	88	...	99·0	87·1	...	...
Malabar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nilgiris ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rāmnād ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Kanara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tanjore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tinnevelly ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trichinopoly ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	...	...	292	...	191	144	25	189		101	88	...	99·0	87·1	...	...
Grand total ...	...	...	297	...	191	144	25	189	...	106	92	1	99·0	87·6	...	1·0

L

Statement No. IV showing the number of persons primarily vaccinated and the number of those persons who were successfully vaccinated in the Madras Presidency in each of the undermentioned years.

	Persons primarily vaccinated.																			
—	1908–1909.		1909–1910.		1910–1911.		1911–1912.		1912–1913.		1913–1914.		1914–1915.		1915–1916.		1916–1917.		1917–1918.	
	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	* Total number.	Number successfully vaccinated.	* Total number.	Number successfully vaccinated.	* Total number.	Number successfully vaccinated.
Government vaccinators ...	12,478	11,319	12,448	11,758	11,214	10,270	11,897	10,545	15,646	13,254	17,492	17,015	19,843	17,892	16,052	14,283	17,276	13,800	17,765	15,057
Local Fund do. ...	1,373,883	1,265,809	1,319,314	1,163,628	1,240,602	1,027,398	1,328,350	1,133,157	1,277,687	1,118,543	1,335,023	1,223,086	1,333,727	1,186,576	1,332,471	,155,851	1,275,205	1,090,029	1,194,558	989,157
Cantonment do. ...	5,164	5,072	4,134	4,023	4,187	3,963	3,606	3,421	4,821	4,681	5,021	4,916	4,282	3,949	4,354	4,152	3,218	2,950	3,710	3,497
Zamindari do. ...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Municipal do. ...	110,669	106,433	111,045	105,198	111,754	102,748	111,070	103,028	103,170	99,018	110,076	106,611	113,408	108,742	112,146	10,683	114,172	107,326	121,439	113,652
Dispensaries do. ...	129	120	18	18	5	5	65	60	17	11	6	6	1	...	99	96	148	145	191	189
Medical Subordinates ...	1,045	758	369	214	411	229	497	322	206	118	139	114	131	117	1,681	1,464	250	213	197	103
Total	1,503,368	1,389,511	1,447,328	1,284,839	1,368,173	1,144,613	1,455,485	1,250,527	1,401,547	1,235,625	1,467,757	1,351,748	1,471,392	1,317,277	1,466,803	1,282,676	1,410,269	1,214,563	1,337,860	1,121,655

* As per G.O. No. 1158 L., Mis., dated 4th September 1911.

Statement No. V showing particulars of Vaccination verified by Inspecting Officers during 1917–18.

Districts.	Total number of persons vaccinated.		Total number inspected.						Percentage of inspection to total number vaccinated.						Percentage of cases found successful to total number inspected.						Percentage of success as reported by Vaccinators.	
			By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.		By Sanitary Assistants to District Medical and Sanitary Officers.		By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.		By Sanitary Assistants to District Medical and Sanitary Officers.		By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.		By Sanitary Assistants to District Medical and Sanitary Officers.			
	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.
NORTHERN RANGE.																						
Ganjām	63,466	21,972	1,297	1,013	48,831	15,993	...	...	2·0	4·6	76·9	72·8	...	...	86·8	86·5	78·8	63·4	...	...	84·6	80·9
Gōdāvari	56,202	6,485	1,241	290	47,610	2,717	149	19	2·2	4·5	84·7	41·9	0·3	0·3	83·9	41·0	54·8	39·2	84·6	94·7	61·0	57·7
Guntūr	58,619	23,122	617	...	42,536	6,127	1,340	46	1·1	...	72·6	26·5	2·3	0·2	92·1	...	74·6	67·0	89·2	65·2	88·7	89·0
Kistna	66,995	7,533	2,235	811	55,118	2,012	160	...	3·3	10·8	82·3	26·7	0·2	..	91·8	62·6	77·1	45·9	100·0	...	89·2	77·4
Nellore	34,422	14,350	632	106	21,111	5,638	...	...	1·8	0·7	61·3	39·3	...	...	98·6	50·9	63·4	54·3	...	...	72·6	66·6
Vizagapatam	87,177	29,481	1,049	22	50,695	21,680	...	...	1·2	0·1	58·2	73·5	...	...	83·9	40·9	77·2	48·1	...	...	85·2	77·2
Koraput	24,320	4,941	970	137	15,888	2,880	...	...	4·0	2·8	65·3	58·3	...	...	87·9	75·2	72·5	65·5	...	...	83·5	72·0
Total ...	391,201	107,884	8,041	2,379	281,789	57,047	1,649	65	2·1	2·2	72·0	52·9	0·4	0·1	88·8	70·2	72·0	55·4	89·8	73·8	81·3	78·0
CENTRAL RANGE.																						
Anantapur	27,445	1,378	458	203	17,209	659	...	...	1·7	14·7	62·7	47·8	...	...	93·2	81·3	69·0	34·0	...	...	90·4	72·5
Bellary	27,256	2,367	89	130	16,515	94	...	...	0·3	5·5	60·6	3·9	...	...	100·0	100·0	71·7	41·5	...	...	92·7	71·3
Chingleput	53,556	4,364	1,060	175	45,009	3,002	...	...	1·9	4·0	84·0	68·8	..	...	96·2	78·3	79·1	51·1	...	...	79·4	54·8
Chittoor	33,692	3,501	435	3	19,257	1,646	...	...	1·3	0·1	57·2	47·0	...	...	100·0	100·0	76·9	33·7	...	...	87·5	54·6
Cuddapah	25,044	2,252	523	230	21,637	448	...	...	2·1	10·2	86·4	19·9	...	...	84·3	34·8	57·8	31·3	...	...	78·6	68·0
Kurnool	25,821	4,069	659	57	18,135	2,201	...	...	2·6	1·4	70·2	54·1	...	...	98·6	84·2	62·0	31·4	...	...	96·9	93·4
Madras	23,237	11,971	...	...	*	*	...	...	...	...	*	*	...	...	...	...	...	...	...	...	...	...
North Arcot	65,020	4,856	1,075	3	50,739	2,257	405	...	1·7	0·1	76·3	46·5	0·6	...	100·0	100·0	80·6	55·8	71·1	...	86·8	65·5
Salem	45,222	2,625	1,608	117	27,699	970	...	...	3·6	4·5	61·3	36·9	...	...	96·7	63·3	75·9	42·5	...	...	89·6	82·5
South Arcot	68,962	12,514	2,756	355	55,841	7,574	...	...	3·9	2·8	80·9	68·5	...	...	96·2	84·5	76·8	71·6	...	...	80·4	73·6
Total ...	395,255	49,897	8,663	1,273	272,041	18,851	405	...	2·2	2·6	68·5	37·6	0·1	...	96·3	73·8	74·5	54·6	71·1	...	86·7	68·6
SOUTHERN RANGE.																						
Coimbatore	77,782	12,757	...	...	42,534	3,539	...	...	...	...	54·5	27·7	...	...	...	...	65·9	48·7	...	...	68·3	70·1
Madura	68,264	21,326	853	...	46,768	2,740	...	...	1·2	...	68·5	12·8	...	...	80·2	...	77·4	36·4	...	...	78·8	44·9
Malabar	109,786	42,414	1,372	1,716	66,041	15,225	...	...	1·2	4·4	60·1	35·9	...	...	94·9	66·4	73·2	55·4	...	...	78·0	55·9
Nilgiris, The	5,145	2,329	113	54	2,651	708	...	...	2·1	2·3	51·5	30·3	...	...	92·9	72·2	91·6	90·9	...	.	93·8	88·3
Rāmnād	52,132	2,717	292	147	28,836	585	...	...	0·5	5·4	55·3	21·5	...	...	92·8	86·3	88·6	49·2	...	...	73·3	82·6
South Kanara	41,131	6,339	2,697	261	27,059	2,294	...	...	6·5	4·1	65·7	36·1	...	...	97·2	90·8	82·9	49·7	..	...	84·5	69·7
Tanjore	72,103	9,930	847	841	36,293	3,125	104	.	11·7	8·4	50·3	31·4	0·1	...	91·6	67·1	86·6	63·4	83·5	...	93·2	84·3
Trichinopoly	61,271	2,802	2,590	946	39,485	371	...	...	4·2	33·7	64·4	13·2	...	...	78·3	82·3	80·3	65·2	...	...	86·6	82·3
Tinnevelly	60,080	9,339	1,202	577	47,631	1,888	...	...	2·0	6·1	79·2	20·2	...	...	81·5	62·5	73·0	44·3	...	...	79·8	91·9
Total ...	547,694	109,953	9,966	4,542	337,298	30,475	104	...	1·8	4·1	61·5	20·2	0·01	...	87·9	71·5	77·3	53·5	83·5	..	82·2	66·2
Grand total ...	†1,334,150	†267,734	26,670	8,194	891,128	106,373	2,158	65	2·0	3·1	66·8	39·4	0·2	0·02	90·9	71·5	74·8	54·7	85·3	73·8	83·3	71·8

* Information could not be furnished as the post of Deputy Inspector of Vaccination has been abolished.

† Excludes cases performed in cantonments.

Statement No. VI showing the Number of Vaccinations performed in Municipal Towns on children under one year of age (G.O. Mis. No. 1534 L., dated 6th December 1909).

Municipalities.	Number of births available for vaccination during the year 1917–18.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending March 1918.	Date of extension of compulsory vaccination to municipalities.
NORTHERN RANGE.				
Anakāpalle ...	674	147	356	1st Nov. 1891.
Berhampur ...	1,065	226	572	15th April 1891.
Bezwada ...	1,317	428	563	1st May 1892.
Bimlipatam ...	286	38	199	1st Jan. 1894.
Chicacole ...	562	90	356	1st Dec. 1890.
Cocanada ...	2,094	351	1,033	1st June 1890.
Ellore ...	1,942	585	1,115	1st June 1888.
Guntūr ...	1,894	597	801	1st Jan. 1914.
Masulipatam ...	1,274	368	620	1st May 1888.
Narasaraopet ...	361	36	139	1st April 1916.
Nellore ...	1,268	265	425	1st Aug. 1886.
Ongole ...	550	109	286	1st Dec. 1885.
Parlākimedi ...	774	129	437	1st Dec. 1890.
Peddapuram ...	509	56	156	1st April 1916.
Rajahmundry ...	1,559	344	844	1st Jan. 1886.
Tenali ...	493	130	240	1st April 1910.
Vizagapatam ...	1,593	276	544	1st Aug. 1890.
Vizianagram ...	1,541	325	697	1st Jan. 1891.
Total ...	19,756	4,503	9,383	
CENTRAL RANGE.				
Ādōni ...	2,643	146	352	1st Dec. 1886.
Anantapur ...	1,295	71	65	1st Jan. 1886.
Bellary ...	1,455	184	410	1st Jan. 1891.
Chidambaram ...	739	179	379	1st July 1887.
Chinglēput ...	532	131	141	1st April 1897.
Chittoor ...	193	26	80	9th Jan. 1917.
Conjeeveram ...	2,489	685	1,187	1st Jan. 1891.
Cuddalore ...	2,291	652	1,334	1st Aug. 1896
Cuddapah ...	612	132	269	15th July 1888.
Gudiyāttam ...	932	147	549	1st June 1889.
Hospet ...	572	90	309	1st April 1892.
Kurnool ...	1,010	208	451	1st July 1891.
Nandyal ...	369	66	305	1st Jan. 1900
Prodattur ...	509	109	235	1st Sep. 1915
Salem ...	3,230	499	2,190	1st May 1891.
Tiruppattūr ...	780	193	490	1st July 1891.
Tirupati ...	517	88	276	1st Mar. 1890.
Tiruvannāmalai ...	965	280	520	15th Dec. 1897.
Vāniyambādi ...	768	115	595	1st May 1889.
Vellore ...	2,145	391	1,018	1st Jan. 1897.
Walajapet ...	511	107	243	20th May. 1892.
Total ...	23,557	4,499	11,398	
SOUTHERN RANGE.				
Bodinayakanur ...	804	79	499	19th Feb. 1916.
Calicut ...	3,526	525	1,896	1st Oct. 1891.
Cannanore ...	1,138	235	602	1st June 1891.
Coimbatore ...	2,422	593	765	1st Jan. 1889.
Cochin ...	754	202	597	1st Jan. 1894.
Coonoor ...	389	42	160	1st April 1887.
Dharapuram ...	804	113	205	1st Feb. 1916
Dindigul ...	1,475	385	812	16th July 1886.
Erode ...	436	92	153	1st April 1891.
Karūr ...	638	126	324	1st Sep. 1900.
Kodaikānal ...	144	29	100	1st April 1889.
Kumbakōnam ...	2,231	493	967	1st Aug. 1889.
Madura ...	5,687	1,255	3,684	1st Jan. 1890.
Mangalore ...	1,389	197	1,089	1st Sep. 1891.
Māyavaram ...	1,126	281	567	1st Oct. 1886.
Mannārgudi ...	834	178	390	1st Dec. 1890.
Negapatam ...	1,786	528	1,876	1st July 1886.
Ootacamund ...	798	147	440	1st July 1887.
Palamcottah ...	1,541	386	751	1st May 1886.
Palghat ...	2,033	438	1,195	1st Jan. 1883.
Palni ...	736	177	397	1st Dec. 1891.
Periyakulam ...	1,017	224	633	1st Feb. 1891.
Srīrangam ...	846	239	394	1st July 1888.
Srīvilliputtūr ...	1,326	238	875	1st Jan. 1896.
Tanjore ...	2,475	569	1,353	1st July 1893.
Tellicherry ...	1,152	232	673	15th June 1892.
Tinnevelly ...	2,042	560	1,060	1st July 1886.
Trichinopoly ...	4,229	851	2,264	1st Aug. 1890.
Tiruvālūr ...	708	147	308	1st Oct. 1913.
Tuticorin ...	1,568	358	950	1st May 1892.
Virudupatti ...	909	247	845	1st Sep. 1915.
Total ...	46,963	10,166	26,824	
Grand Total ...	90,276	19,168	47,605	

Statement No. VII showing Inspection work done by the Deputy Inspectors of Vaccination during the year 1917–18.

District.	Circle.	Number of inspecting officers. First-grade Deputy Inspectors.	Number of inspecting officers. Second-grade Deputy Inspectors.	Number of inspecting officers. Third-grade Deputy Inspectors.	Number of villages inspected. First-grade Deputy Inspectors.	Number of villages inspected. Second-grade Deputy Inspectors.	Number of villages inspected. Third-grade Deputy Inspectors.	Total number of cases vaccinated.	Number of days spent on Inspection duty.	Number of cases verified. First-grade Deputy Inspectors.	Number of cases verified. Second-grade Deputy Inspectors.	Number of cases verified. Third-grade Deputy Inspectors.	Total number of cases inspected by Deputy Inspectors of all sorts.	Total number of successful cases as reported by Deputy Inspectors.	Percentage of successful cases to the total number inspected as reported by Deputy Inspectors.	Proportion per cent of inspection to total number vaccinated. First-grade Deputy Inspectors.	Proportion per cent of inspection to total number vaccinated. Second-grade Deputy Inspectors.	Proportion per cent of inspection to total number vaccinated. Third-grade Deputy Inspectors.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	NORTHERN RANGE.																	
Ganjām ...	Berhampur	...	...	1	...	...	527	13,442	231	...	...	13,708	13,708	10,511	76·7	...	...	102·0
	Chicacole	1	...	...	529	...	...	14,209	221	9,948	...	...	9,948	7,028	70·6	70·0	...	...
	Aska	...	...	1	...	...	610	11,685	217	...	...	10,601	10,601	8,406	79·3	...	...	90·7
	Parlākimedi	1	...	...	568	...	...	13,211	191	9,693	...	...	9,693	6,542	67·5	73·4	...	...
	Purushottapur	...	...	1	...	...	647	13,655	295	...	...	10,492	10,492	8,095	77·2	...	...	76·8
	Ganjām Hill Tracts (North).	...	...	1	...	...	555	9,723	221	...	...	4,942	4,942	4,115	83·3	...	...	50·8
	Do. (South).	...	...	1	...	...	486	8,444	218	...	...	5,440	5,440	3,936	72·4	...	...	64·4
Gōdāvari ...	Cocanada	...	...	1	...	...	276	14,161	247	...	...	10,297	10,297	6,518	63·3	...	...	72·7
	Rajahmundry	...	...	1	...	...	266	23,490	179	...	...	13,389	13,389	7,326	54·7	...	...	57·0
	Polavaram	...	...	1	...	...	253	5,565	187	...	...	4,438	4,438	2,684	60·5	...	...	79·7
	Peddāpuram	...	...	1	...	...	296	19,329	216	...	...	18,496	18,496	8,767	47·4	...	...	95·7
	Bhadrachalam	...	...	1	...	...	370	3,803	169	...	...	3,707	3,707	1,882	50·8	...	...	97·5
Guntūr ...	Guntūr	1	...	...	203	...	...	23,984	271	15,376	...	...	15,376	11,860	77·1	64·1	...	...
	Narasaraopet	...	...	1	...	...	291	25,809	234	...	...	19,573	19,573	14,020	71·6	...	...	75·8
	Bāpatla	...	...	1	...	...	205	25,982	199	...	...	13,714	13,714	9,968	72·7	...	...	52·8
Kistna ...	Ellore	...	1	...	...	253	...	26,523	241	...	19,589	...	19,589	16,496	84·2	...	73·9	...
	Masulipatam	1	...	...	244	...	...	24,077	199	18,969	...	...	18,969	13,483	71·1	78·8	...	...
	Narasapur	...	...	1	...	...	188	20,887	180	...	...	18,572	18,572	13,462	72·5	...	...	88·9
Nellore ...	Kavali	...	...	1	...	...	81	18,171	106	...	...	5,808	5,808	3,613	62·2	...	...	32·0
	Gudur	...	...	1	...	...	435	18,108	217	...	...	12,144	12,144	7,197	59·3	...	...	67·1
	Kanigiri	...	1	...	...	276	...	15,991	195	...	8,797	...	8,797	5,644	64·2	...	55·0	...
Vizagapatam.	Vizagapatam	...	...	1	...	...	356	35,930	250	...	...	20,631	20,631	15,646	75·8	...	...	57·4
	Vizianagram	1	...	...	267	...	...	33,514	140	26,258	...	...	26,258	15,322	58·4	78·3	...	...
	Pārvatīpuram	...	1	...	...	326	...	28,722	233	...	18,247	...	18,247	12,835	70·3	..	63·5	...
	Gunupur	...	...	1	...	...	349	12,509	181	...	...	7,239	7,239	5,761	79·6	...	...	57·9
Koraput ...	Jeypore	...	...	1	...	...	815	18,612	198	...	...	10,501	10,501	6,920	65·9	...	...	56·4
	Koraput	...	...	1	...	...	663	12,713	204	...	...	8,267	8,267	6,477	78·3	...	...	65·0
	Total ...	5	3	19	1,811	855	7,669	492,249	5,640	80,244	46,633	211,959	338,836	234,514	69·2	73·4	65·5	67·9
	CENTRAL RANGE.																	
Anantapur.	Anantapur	...	...	1	...	...	470	13,112	303	...	...	8,942	8,942	6,219	69·5	...	...	68·2
	Penukonda	...	...	1	...	...	508	16,161	238	...	...	8,926	8,926	5,897	66·1	...	...	55·2
Bellary ...	Bellary	...	1	...	...	178	...	13,573	208	...	8,558	...	8,558	6,127	71·6	...	63·1	..
	Hospet	...	...	1	...	...	218	11,956	270	...	...	8,051	8,051	5,768	71·6	...	...	67·3
Chingleput ..	Chingleput	1	...	...	817	...	...	19,205	209	17,031	...	...	17,031	13,223	77·6	88·7	...	...
	Saidapet	...	...	1	...	...	630	17,788	197	...	...	14,250	14,250	10,170	71·4	...	...	80·1
	Ponnēri	1	...	...	961	...	...	19,382	188	16,730	...	...	16,730	13,730	82·1	86·3	...	...
Chittoor ...	Chittoor	...	...	1	...	...	826	17,494	152	...	...	10,245	10,245	6,853	66·8	...	...	58·6
	Karvetnagar	...	...	1	...	...	689	20,334	190	...	...	10,658	10,658	8,516	79·9	...	...	52·4
Cuddapah ...	Cuddapah	...	...	1	...	...	280	9,884	217	...	...	6,914	6,914	3,917	56·7	...	...	69·9
	Siddhavattam	...	...	1	...	...	316	11,326	211	...	...	8,633	8,633	4,599	53·3	...	...	76·2
	Prodattur... ...	...	...	1	...	...	404	8,696	226	...	...	6,538	6,538	4,120	63·0	...	..	75·2
Kurnool ..	Cumbum	...	1	...	...	367	...	14,422	229	...	11,119	...	11,119	6,702	60·3	...	77·1	...
	Kurnool	...	...	1	...	...	290	15,476	161	...	...	9,217	9,217	5,228	56·7	...	...	59·6
Madras ...	Madras *	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Arcot.	Vellore	...	1	...	...	438	...	14,951	215	...	13,356	...	13,356	11,427	85·5	...	89·3	...
	Rānipēttai	1	...	...	794	...	...	15,333	217	12,716	...	...	12,716	9,656	75·9	82·9	...	...
	Polūr	...	...	1	...	...	500	15,804	222	...	...	13,819	13,819	11,571	83·7	...	...	87·4
	Tiruppattūr	...	1	...	...	473	...	21,186	209	...	13,105	...	13,105	9,516	72·6	...	61·9	...
Salem ...	Salem	...	...	1	...	...	227	13,314	190	...	...	9,458	9,458	7,497	79·2	..	...	71·0
	Śankēri	1	...	...	127	...	...	17,929	186	10,418	...	...	10,418	6,565	63·0	58·2	...	...
	Hosūr	1	...	...	294	...	...	17,019	184	8,793	...	...	8,793	7,386	83·9	51·7	...	...
South Arcot.	Cuddalore	...	1	...	...	492	...	19,711	248	...	18,418	...	18,418	15,061	81·8	...	93·4	...
	Vriddhāchalam	...	...	1	...	...	384	18,105	229	...	..	12,616	12,616	8,851	70·2	...	...	69·7
	Tirukkōyilūr	...	...	1	...	...	230	15,568	220	...	...	10,512	10,512	7,245	68·9	...	...	67·5
	Tindivanam	...	1	...	...	371	...	14,632	197	...	8,454		8,454	7,209	85·3	...	57·8	...
	Villupuram	1	...	...	671	...	...	16,503	214	13,415	...	...	13,415	9,916	73·9	81·3	...	...
	Total ...	6	6	14	3,664	2,319	5,972	408,864	5,530	79,103	73,010	138,779	290,892	212,969	73·2	75·1	74·1	67·7
	SOUTHERN RANGE.																	
Coimbatore.	North Coimbatore ...	...	1	...	...	352	...	21,304	207	...	10,681	...	10,681	6,510	61·0	...	50·1	...
	South do. ...	...	...	1	...	...	223	18,905	212	...	...	10,922	10,922	8,006	73·3	...	...	57·8
	East do. ...	1	...	...	283	...	...	23,462	257	12,247	...	...	12,247	6,934	56·6	52·1	...	...
	Central do. ...	1	...	...	319	...	...	22,469	259	12,223	...	...	12,223	8,340	68·2	54·4	...	...

* Information could not be furnished as the post of Deputy Inspector of Vaccination has been abolished.

Statement No. VII showing Inspection work done by the Deputy Inspectors of Vaccination during the year 1917–18— cont.

District.	Circle.	Number of inspecting officers.			Number of villages inspected.			Total number of cases vaccinated.	Number of days spent on Inspection duty.	Number of cases verified.			Total number of cases inspected by Deputy Inspectors of all sorts.	Total number of successful cases as reported by Deputy Inspectors.	Percentage of successful cases to the total number inspected as reported by Deputy Inspectors.	Proportion per cent of inspection to total number vaccinated.		
		First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.			First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.				First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
								SOUTHERN RANGE—*cont.*										
Madura ...	Madura	...	1	...	...	1,101	...	20,226	269	...	16,080	...	16,080	12,590	78·3	...	79·5	...
	Dindigul	...	1	...	...	425	...	20,122	222	...	18,294	...	18,294	12,956	70·8	...	90·9	...
	Usilampatti	...	...	1	...	...	301	17,756	238	...	...	15,134	15,134	11,674	77·1	...	...	85·2
Malabar ...	Malappuram	...	...	1	...	...	140	33,958	211	...	...	19,911	19,911	15,549	78·1	...	...	79·6
	Tellicherry	...	...	1	...	...	255	30,185	222	...	...	20,549	20,549	14,776	71·9	...	...	68·1
	Calicut	...	...	1	...	...	185	29,050	206	...	...	14,371	14,371	8,579	59·7	...	...	49·5
	Palghat	...	1	...	...	169	...	42,712	206	...	26,435	...	26,435	17,905	67·7	...	61·9	...
Nilgiris ...	The Nilgiris	...	...	1	...	...	736	4,972	276	...	...	3,359	3,359	3,074	91·5	...	...	67·6
Rāmnād ...	Srīvilliputtūr	...	1	...	...	350	...	18,812	253	...	10,044	...	10,044	8,220	81·8	...	53·4	...
	Tiruppattūr	1	...	...	487	...	...	17,089	227	9,959	...	...	9,959	8,987	90·2	58·2	...	...
	Rāmnād	...	...	1	...	...	289	17,040	179	...	...	9,418	9,418	8,635	91·6	...	...	55·2
South Kanara.	Northern S. Kanara ...	...	1	...	...	133	...	15,831	240	...	10,464	...	10,464	8,887	84·9	...	66·1	...
	Central do. ...	...	...	1	...	...	115	14,315	219	...	...	8,041	8,041	6,147	76·4	...	...	56·2
	Southern do. ...	...	...	1	...	...	167	16,626	277	...	...	10,848	10,848	8,563	78·2	...	...	65·2
Tanjore ...	Tanjore	...	1	...	...	350	...	14,872	211	...	9,047	...	9,047	7,824	86·5	...	60·8	...
	Negapatam	1	...	...	204	...	...	16,830	219	9,971	...	...	9,971	8,507	85·3	59·3	...	...
	Pattukkōttai	...	1	...	...	397	...	19,560	234	...	9,519	...	9,519	8,646	90·8	...	49·0	...
	Kumbakōnam	...	...	1	...	...	342	19,707	264	...	...	10,881	10,881	8,458	77·7	...	...	55·2
Tinnevelly ...	Srīvaikuntam	...	1	...	...	287	...	26,452	248	...	16,733	...	16,733	10,958	65·4	...	63·2	...
	Shermadevi	...	1	...	...	217	...	25,002	258	...	17,312	...	17,312	12,248	77·4	...	69·2	...
	Koilpatti	1	...	...	276	...	...	22,239	241	15,474	...	...	15,474	12,431	80·3	69·5	...	...
Trichinopoly.	Trichinopoly	1	...	...	181	...	...	22,142	172	11,100	...	...	11,100	8,993	81·1	50·1	...	...
	Nāmakkal	...	...	1	...	...	539	19,667	208	...	...	13,946	13,946	11,287	80·9	...	...	70·9
	Ariyalūr	1	...	..	443	...	...	17,357	217	14,810	...	...	14,810	11,673	78·8	85·3	...	...
	Total ...	7	10	11	2,193	3,781	3,292	588,662	6,515	85,784	144,609	137,380	367,773	277,357	75·4	60·5	64·3	61·8
	Total for the Presidency.	18	19	44	7,668	6,955	16,933	1,489,775	17,685	245,131	264,252	488,118	997,501	724,840	72·7	68·9	67·0	66·0

Government of Madras

LOCAL & MUNICIPAL DEPARTMENT (LOCAL)

G.O. Nos. 1177-77A L., 12th September 1918

Vaccination

Reviewing the report on the working of the — department in the Madras Presidency during the year 1917-18.

READ—the following paper :—

Letter—from Major W. A. JUSTICE, M.B.C.M., D.P.H., I.M.S., Sanitary Commissioner for Madras.
To—the Secretary to Government, Local and Municipal Department.
Dated—the 19th August 1918.
No.—869-V.

ABSTRACT.—Submitting report on the working of the Vaccination department in the Madras Presidency for 1917-18.

Order—No. 1177 L., dated 12th September 1918.

The report on vaccination was due with the Government on the 1st July but was received only on the 23rd August. The Deputy Sanitary Commissioner explains that revised returns called for from the Deputy Inspector of Vaccination, Bhadrachalam, and Chairman, Municipal Council, Nellore, were received only on the 13th and 15th June 1918, but this explanation does not account for the further delay of two months and the Government must insist on punctuality.

2. The total number of vaccine operations performed during the year rose slightly, from 1,699,926 to 1,707,278, or by ·43 per cent. The number of deaths from smallpox was 34,958 in 1917 as against 21,903 in 1916 : the increase occurred in all districts except Anantapur, Ganjām, Gōdāvari, Chittoor and Kurnool There were large increases in the number of operations performed in the districts of Coimbatore, Guntūr and Nellore; in these districts smallpox was epidemic in the year. In Vizagapatam, Salem, Ganjām, Chittoor and Gōdāvari, there were marked decreases in the number of operations and smaller decreases in Ramnad and Kistna, though in the two lastnamed districts and in Vizagapatam and Salem smallpox was prevalent. The decreases are attributed to vacancies in the staff of vaccinators which could not be filled up for want of suitable men and the poor quality of the work of the old set of vaccinators who knew that they would be replaced by qualified men at the introduction of the revised scheme sanctioned under G.O. No. 963 L., dated 4th July 1917. The suggestion of the Sanitary Commissioner that the compulsory provisions of the Madras Local Boards Act, 1884, should be extended further is commended to all district boards.

3. The municipalities, as a whole, showed an increase of 20,300 cases, or 11·6 per cent, as compared with the previous year. Madura and Cochin showed marked increases, while large decreases were noticed in Madras and Cocanada. The fall in Madras is in revaccinations and is apparently a continued reaction from the very high figures of 1915-16; in Cocanada it was apparently due to the action of the municipal council which reduced the minimum outturn required from the vaccinators. The vaccinators took advantage of the relaxation without improving the quality of their work and the council has been advised to replace them as soon as possible.

4. Re-vaccinations alone showed an increase of 56,303 or 25·7 per cent, distributed with local variations, over local fund areas, municipalities and cantonments. Large increases occurred in the districts of Malabar, Guntūr and Nellore and in the case of municipalities in Madura.

5. It is stated that, with a view to improve the technique of operation, special circulars were issued pointing out the need for using lymph promptly and the system of issuing tri-monthly supplies of lymph was extended to Madura. The reported percentage of success, however, fell again from 86·7 to 83·4 in the case of primary and secondary vaccination, and from 73·4 to 70·8 in the case of re-vaccination. Coimbatore and Gōdāvari again showed specially poor results. The causes for this were investigated by the Sanitary Commissioner and the Deputy Sanitary Commissioner and their recommendations for effecting an improvement are receiving attention. The total number of successful operations per mille of the population was returned at 31·2 for the Presidency as a whole, against 32·8 in the previous year.

Wherever the proportion of successful operations is low, complaints are made about the quality of the lymph. The Director of the King Institute has been requested by the Sanitary Commissioner to see if there is really any defect in the lymph supplied and to adopt such remedial measures as may be necessary. The Government will be glad to receive a report of the result of this investigation, since although much credit has not been given to complaints of this nature from vaccinators on whom, as a class, little reliance could be placed, there have been instances in which the complaints have been corroborated by better qualified operators. As under the new scheme vaccinators will have no verification work, the Sanitary Commissioner proposes to supply vaccine to all of them thrice a month, in order to keep them fully engaged throughout the month; it is hoped that this will have some effect in improving the percentage of successful operations. The Sanitary Commissioner and his deputies should give this subject their close attention in their tours and see that the instructions issued as to the period within which vaccine dispatched from the Institute should be used, are observed.

6. The average cost of each successful operation in the case of local fund vaccinations was As. 4–2, against As. 3–10 in the previous year, while in the case of municipal vaccinations the cost fell from As. 4–10 to As. 4–5. The cost was in excess of As. 6 in the districts of Cuddapah, Gōdāvari and The Nilgiris and in excess of As. 9 in the municipalities of Tirupati, Kodaikanal and Peddapuram.

7. The number of children under one year of age successfully vaccinated again fell from 588,937 to 550,393. The districts in which large decreases occurred were The Nilgiris, Kistna, Malabar and Bellary. Decreases also occurred in the municipalities of Bellary, Coonoor and Peddapuram. In Peddapuram, Adōni, Anantapur, Bellary, Chingleput, Coimbatore and Dharapuram, the number of children protected against smallpox constitutes a very small proportion of the number, which, according to the birth registers, should have been available for vaccination. The municipal councils concerned should insist on greater attention to the vaccination of children.

8. The Deputy Inspectors of Vaccination verified 66·8 per cent of the total number of primary and secondary vaccinations in all areas except cantonments and 39·4 per cent of the cases revaccinated. The District Medical and Sanitary Officers verified a small percentage of primary and secondary operations. In Bellary and Ramnad the total number of cases verified by them was less than one per cent of the total number of operations. The verification work done by sanitary assistants to the District Medical and Sanitary Officers was again inadequate; it was less than one per cent in Gōdāvari, Kistna, North Arcot and Tanjore—four out of the five districts in which sanitary assistants were employed. The Government desire to have the explanation of the officers responsible for this neglect of verification.

9. The general results of the year were on the whole unsatisfactory. Though there was a small increase in the total number of operations performed, there was a fall in the percentage of successful operations and in the number of children under one year of age successfully vaccinated. The reorganization of the vaccination staff with effect from the 1st of April 1918 has, it is hoped, enabled presidents of local boards to recruit vaccinators of a better class than those hitherto employed. The staff of

deputy inspectors has been strengthened and an additional Deputy Sanitary Commissioner joined duty towards the end of the year. The Government trust that, with an improved staff of vaccinators and more efficient supervision, the results in the current year will be more satisfactory.

(True extract)

R. A. GRAHAM,
Acting Secretary to Government.

To the Sanitary Commissioner.
,, the Sanitary Engineer.
,, the Surgeon-General.
,, the Local and Municipal (Medical) Department.
,, the Home (Judicial) Department.
,, the Revenue Department.
,, the Assistant Quartermaster-General, 9th (Secunderabad) Division, with C.L.
,, the Director of Public Instruction.
,, the Accountant-General.
,, the President, Corporation of Madras.
,, all Collectors.
,, all Presidents of District Boards.
,, all Chairmen of Municipal Councils.
Editors' Table.

Endorsement—No. 1177A L., dated 12th September 1918.

Copy to the Government of India, Department of Education.

R. A. GRAHAM,
Acting Secretary to Government.

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